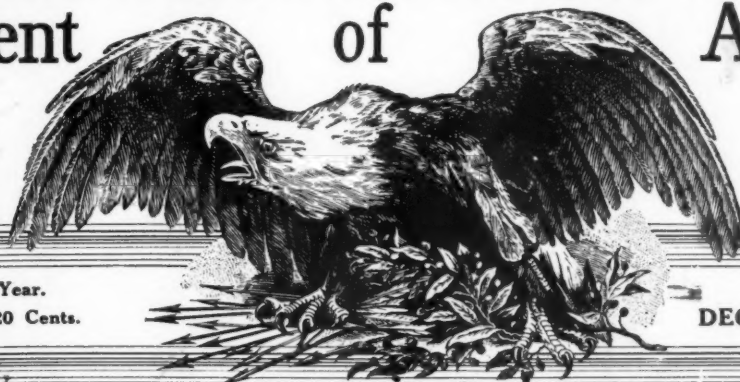


Manufacturers Record

Exponent of America



\$6.50 per Year.
Single Copy, 20 Cents.

Baltimore, Md.
DECEMBER 28, 1922

1922-1923

The reversal of the financial policies which wrought wreck and ruin in 1921 and from which we have not yet fully recovered marked the closing year as epochal in national affairs.

From the gloom and midnight darkness which covered the land following a depression which if we include the decrease in farm property swept away probably \$50,000,000,000 in value, we are emerging into the dawning hours of returning sunshine.

We have diagnosed the almost fatal disease from which we suffered and the remedy is being applied. The disease was due to ignorance or incompetence or worse, but those responsible for that condition are no longer in control and with the remedies now being used, the patient—American business—is rapidly regaining vitality.

The new year will have to face many problems but none of them, we are sure, will be as complex, and as hard of solution, as those which we have met and mastered during 1922.

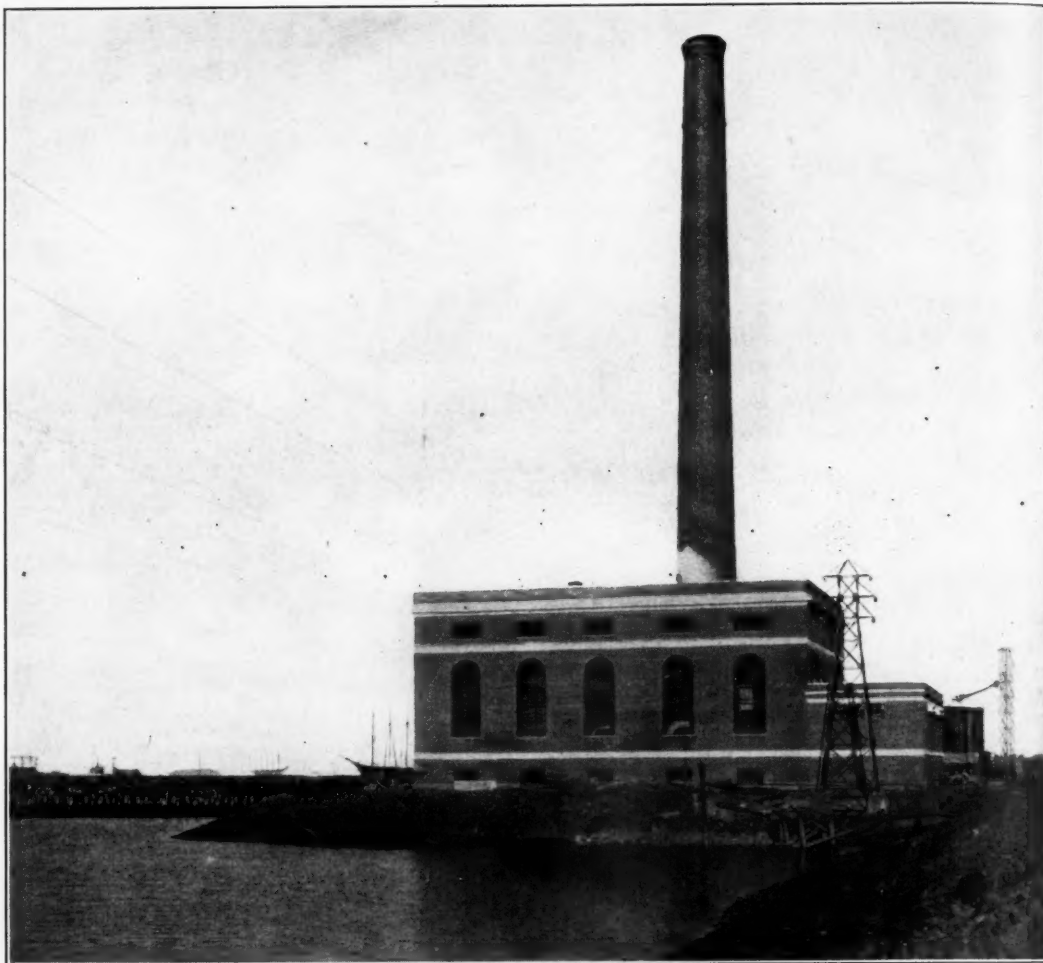
In the very realization of the agricultural problem which has come to the whole country is to be found the assurance that the nation will overcome these difficulties and once more make prosperous agriculture the foundation of our larger and broader national life and our business activities.

The development of our industries, the expansion of our transportation facilities, the building of modern highways throughout the land, the construction of hundreds of thousands of much needed dwellings, the expenditure of hundreds of millions upon schools, churches, and municipal and office buildings will all combine to tax the constructive powers of the whole country.

We are going to pay our national indebtedness by increasing our national wealth through the larger utilization of our boundless resources rather than by niggardly, cheese paring methods which while nominally saving a penny would for every penny thus saved be destroying a dollar of easily newly created wealth potentiality.

It behooves us therefore with our financial situation being cleared up, and our business interests reviving, to take courage and go forward.

The supposed lions in the path of progress will prove to be only timid rabbits ready to run from us when we determine that forgetting the things that are behind we will press forward to new and larger victories in 1923 than we had in 1922.



New Steam Power Plant of The Cumberland County Power and Light Co., Portland, Maine.

FINISHED on scheduled time, this new steam power plant is now supplying current to the City of Portland. By maintaining a rigorous construction schedule, The Foundation Company, as General Contractor, delivered the building with its installation of modern machinery in time to meet the extra demands on the steam power plant caused by low water in the Saco and the corresponding limitation in the output of the hydro-electric power plant. The operation was completed within the estimated cost and has gained for The Foundation Company another *satisfied client*.

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Industrial Plants
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BUILDERS OF SUPERSTRUCTURES AS WELL AS SUBSTRUCTURES

TRUSCON PLATFORMS

ALLOY STEEL

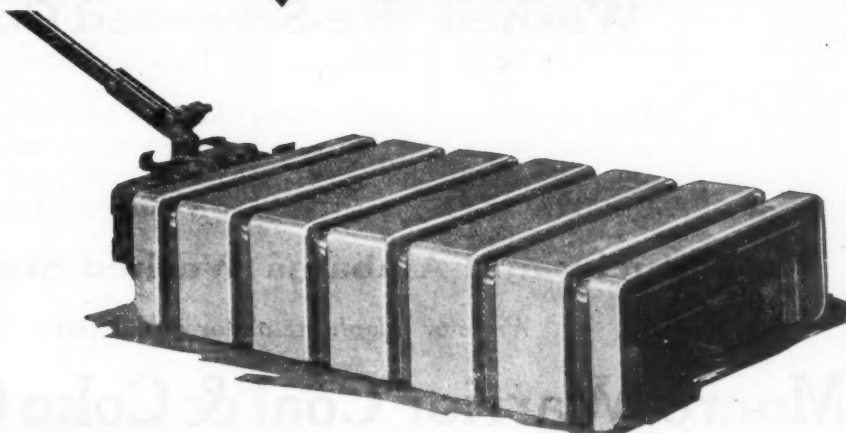
TRUSCON
PRODUCTS
TRUSCON
STEEL CO.

STANDARD SIZES
TRUSCON PLATFORMS

Height in Clear	Width Inside of Legs	Over- all Width	Over- all Length
6 1/2"	21 3/4"	24"	24"
7 1/2"	27 3/4"	30"	30"
9 1/2"	33 3/4"	36"	36"
10 1/2"	39 3/4"	42"	42"
11 1/2"	45 3/4"	48"	48"
12"			54"
			60"
			66"
			72"

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When ordering give full
width and height of truck
and clearance required.



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For convenience in handling small parts and packages, we make skeleton boxes which fit on any size platforms which we make. Welded securely to platform or equipped with steel stakes which fit into ribs of platform. Boxes are 12", 18" or 24" deep.

Every time material is set on the floor it costs money. It is no more work for an operator who has finished his work or for a shipper who has loaded a box, to place it on a platform than it is to throw it on the floor. By loading such material on platforms and moving it with a lift truck, time and money can be saved.

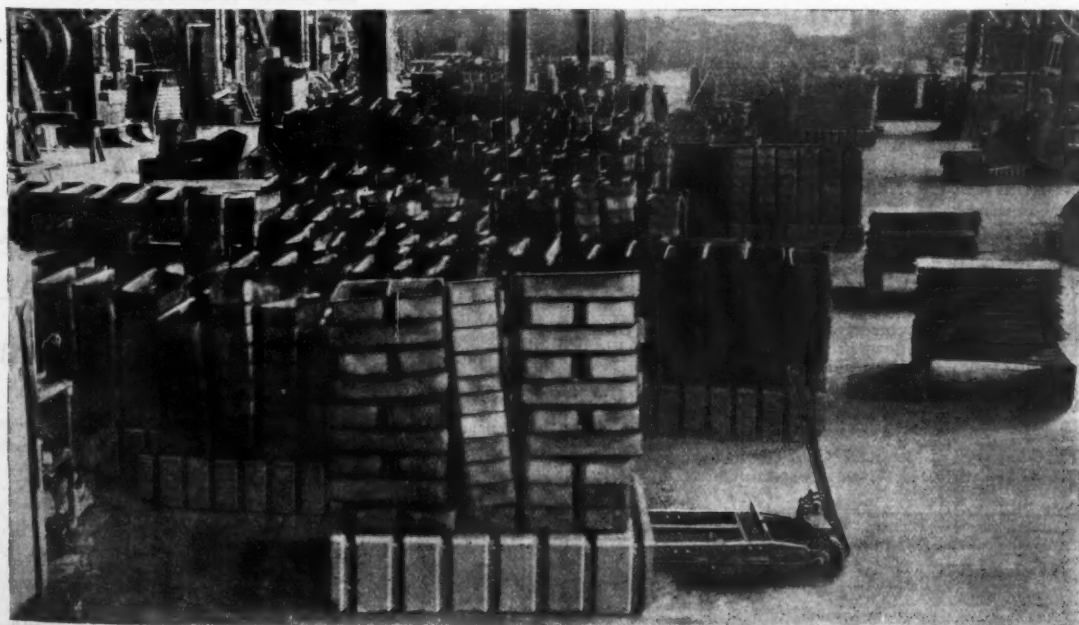
Truscon Steel Platforms are of improved design, assuring exceptional strength. Deep stiffening ribs extend completely around the platform and are perfectly formed at the corners without buckling. The sides are inclined inwards from the vertical, acting as a brace to insure greatest carrying capacities. See table above for sizes; send us information on your requirements and let us quote you.

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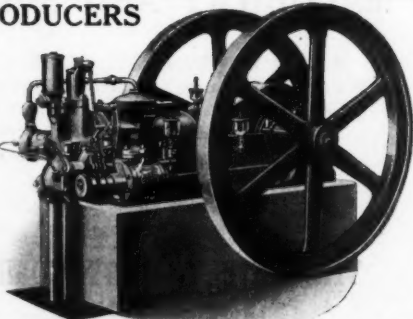
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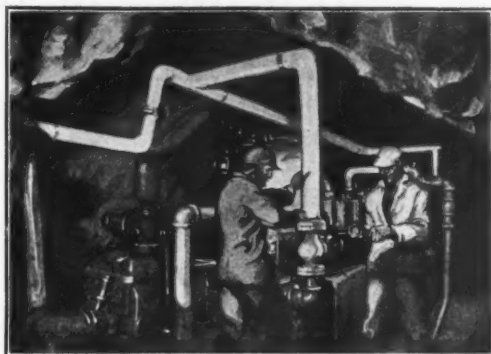
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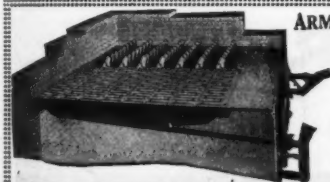
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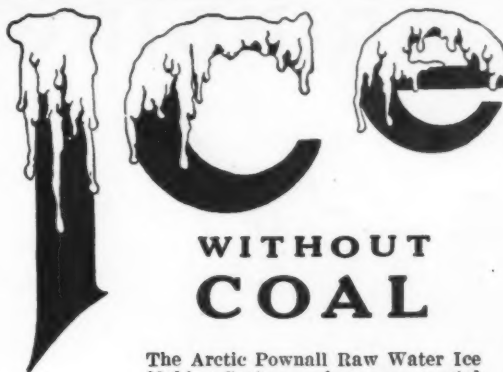
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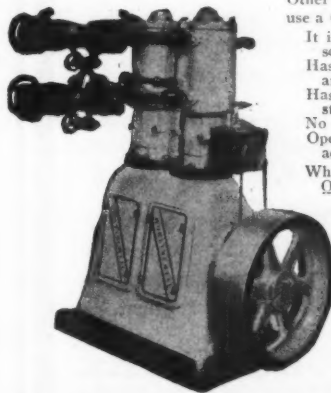
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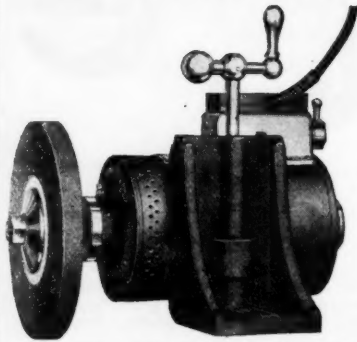
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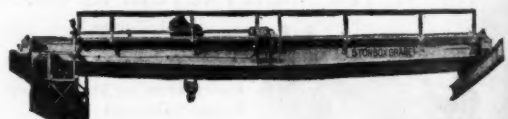
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AND SUPREME AUTO OIL.**

*Look for the Sign
Of the Orange Disc*

GULF REFINING CO.

MACHINE BRONZE

**Solid and Cored Bars
in 12" Lengths**

*Here's
Better
Bearing
Service*

Stocked by us in convenient sizes for immediate delivery.

Ask for list giving sizes and weights



SMITH-COURTNEY COMPANY
SUPPLIES AND MACHINERY, RICHMOND, VA.

ENGINEERS PLANNING POWER TRANSMISSIONS
Secure Data and Estimates of "MORSE" DRIVES
SAVE Construction, Space, Light, Fuel. Producing More with Less
MORSE CHAIN CO., - ITHACA, N. Y.

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Marine "VITA" Glue

Sets and stays in seams. Has tenacity and vitality

For samples and prices write to

BINNEY & SMITH COMPANY

41 East 42nd Street, at Madison Ave., New York City

ROBINSON OILS

"they lubricate more and outlast other oils"

WM. C. ROBINSON & SON CO.

ESTABLISHED 1832

Main Office: BALTIMORE, MD.

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BRANCHES IN 20 CITIES

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TANK CAR SHIPMENTS ONLY

FUEL OIL

GAS OIL

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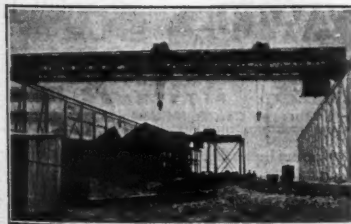
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Sales Department

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Tulsa, Okla.

CHESAPEAKE CRANES



110-ft. Span Chesapeake Crane—1 of 4 Chesapeake Cranes at plant General Electric Co., Baltimore, Md.

"THE MOST
RUGGED CRANE
BUILT"

STEEL
STRUCTURES—
BRIDGES

"STEEL
LUMBER"

GENERAL
MACHINE
WORK

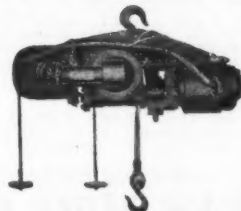
CHESAPEAKE IRON WORKS

BALTIMORE, MD.

NEW YORK OFFICE, SINGER BUILDING

THE EVEREDY

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Low Priced Quick Speed Light Weight

Send For Information


READING CHAIN & BLOCK CORPORATION
READING - - - PENNA.

PULLEYS HANGERS

The **W. B. WOOD** Line
SONS CO.

CLUTCHES

COUPLINGS



STEP CONE PULLEYS,
TAPER CONE PULLEYS,
FLANGED PULLEYS or
any style of pulleys for
any purpose, all made of
CAST IRON and cor-
rect in design.

T. B. WOOD'S SONS CO.
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POWER TRANSMITTING MACHINERY

Goldens' Foundry & Machine Co.

COLUMBUS, GEORGIA

MANUFACTURERS OF

**MACHINE MOULDED PULLEYS
HANGERS SHAFTING**

Couplings, Pillow Blocks, Floor Stands, Collars, Etc.

Send for Price List and Discount Sheet

CRESSON-MORRIS CO.

POWER TRANSMITTING MACHINERY

We make a complete line of Power Trans-
mitting Machinery, Shafting, Rope Trans-
mission, Machine Moulded and Cut Iron
and Steel Gears for heavy service.

PHILADELPHIA, PA.

Branch Office:

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WELLER

FRICTION CLUTCHES



WELLER EXPANSION FRICTION CLUTCHES

SIMPLEST, MOST POWERFUL CLUTCH MADE
ONE POINT OF ADJUSTMENT—NO
ATTENTION REQUIRED
HAS VERY FEW PARTS—NO
OIL REQUIRED

IT MAKES NO DIFFERENCE WHETHER THIS
CLUTCH IS IN A DRY, WET, CLEAN OR DIRTY
PLACE. IT CAN BE COVERED WITH DUST AND
DIRT AS IN A CEMENT OR STONE CRUSHING PLANT
OR WATER CAN BE DRIPPING ON
IT AND IT WILL DO THE WORK
JUST THE SAME.



WE ALSO MAKE A COMPLETE LINE
CONVEYING AND POWER TRANS-
MITTING MACHINERY.

WRITE FOR PRICES

WELLER MFG. CO.

1820-1856 N. Kostner Ave. CHICAGO, ILL.

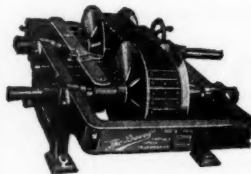
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NEW YORK BOSTON BALTIMORE CLEVELAND
PITTSBURGH SALT LAKE CITY SAN FRANCISCO

"The Reeves"

Variable Speed Transmission

will give you any speed you
want in a moment without
stopping your machine.



It will increase your out-
put, save labor, improve
workmanship.

Can be profitably used on
any machine requiring
speed changes.

Ask for Catalog T-21

REEVES PULLEY CO.

Columbus, Ind.

HERRINGBONE CUT GEARS

MILL DRIVES: **FAWCUS** SPUR WORM BEVEL GEARS

SPEED REDUCERS

FAWCUS MACHINE CO., PITTSBURGH, PA.

So. Agents: G. R. MUELLER Co. BIRMINGHAM, ALA.

MEDART means **EVERYTHING**

Line Shafting Equipment

THE MEDART COMPANY
(Formerly Medart Patent Pulley Co.)

General Offices and Works: St. Louis, U. S. A.

Office and Warehouse: Cincinnati Offices: Chicago and Philadelphia

The ability of Fabroil Gears to resist destructive elements is only one of their many remarkable properties



Let Service Tests Speak for Themselves

We have repeatedly claimed that Fabroil Gears lengthen the life of machinery and silence operation, and that they wear better than iron.

But don't be content to accept these statements. Test the gears yourself. Others have done it and become enthusiastic about them. When you have seen one of them at work you will also be convinced of their superior qualities.

Many leading machinery manufacturers and users now specify Fabroils as standard equipment. And you cannot afford to overlook the economies and other advantages to be gained.

There's a size to suit your needs—for driving coffee mills or for transmitting hundreds of horsepower. Standard blanks can be shipped from stock.

*Ask the G-E Sales Office nearest you
for complete information.*

*Two Fabroil Pinions driving
tumblers in foundry.*

**General  Electric
Company**

General Office
Schenectady, NY

Sales Offices in
all large cities



Buying Service



Photo by courtesy of our customer

AN INSTANCE of the long, steady service given by BLISS Presses is afforded by the three "Stiles" type presses illustrated.

Twenty-three years ago they were purchased by their present owner from another firm in the West where they had been in use. All three presses are used continually 9½ hours a day and are still in good working condition. They are shown forming various small mechanical specialties and mechanisms. Eight to ten thousand pieces is their average working production.

Bliss on your machinery is more than a name, it's a guarantee.

—Bliss for Machinery—

E. W. BLISS CO.

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AND WORKS

BROOKLYN, N. Y., U. S. A.

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No. 323

ITALY, 345 Via Nizza, Turin

FRANCE, 54 Blvd. Victor-Hugo, St. Ouen, Paris

SMALL TOOLS

We manufacture and stock—
Taps—For all purposes and forms of thread.
Dies—As complete a line as our taps.
Reamers—Plain and adjustable.
Counterbores—Regular and interchangeable.
Die stocks and sets.

Hobs—Pipe, roll threading—thread
milling.
Threading Tools and Holders.
Milling Cutters—All commercial
types and sizes.

PRATT & WHITNEY CO.

WORKS: HARTFORD, CONN.
111 BROADWAY NEW YORK

BIRMINGHAM, ALA.
2015 FIRST AVE.



We are manufacturers of high grade special and automatic machinery. We also manufacture special dies, tools, fixtures and gauges, also duplicate and interchangeable machine parts. Inventions developed, models made and standardized for commercial production.

Send blueprints and specifications for estimates.

UNIVERSAL MACHINE COMPANY

Industrial Building

Baltimore, Maryland

PURE
OAK
TANNED

FOR

LEATHER BELTING

ACID
WATER
STEAM
PROOF

THE DRUID OAK BELTING COMPANY
(INC.)

BALTIMORE, MD.

Punches,
Shears,
For
Sheet



Bending
Rolls, etc.,
Fabricating
Metals

Let Us Know Your Requirements

GREY IRON CASTINGS TO 20 TONS
BRASS CASTINGS TO 1000 LBS.

Send Blue Prints for Estimates

COVINGTON MACHINE COMPANY, Inc.
COVINGTON, VA.

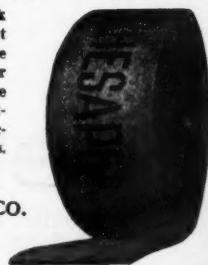
For Efficiency Always

CHESAPEAKE STITCHED CANVAS BELTING

Manufactured from 32-oz. duck and designed to give the best results in actual service. Made for all conditions of power transmission—inside or outside—wet or dry. Chesapeake Belting has been giving satisfactory service for over 30 years.

Write for printed matter.

CHESAPEAKE BELTING CO.
BALTIMORE, MD.



HAVEMEYER PRODUCTS

A Complete line of Metal Building Products

Immediate stock shipments from our warehouse in Birmingham and from other points throughout the South.

Havemeyer Bars for reinforced concrete—Bent or straight
Havemeyer Supporting, Spacing and Tying Devices
 for holding bars in place in forms.

Inserts	Base Bead	Soffit Clips
Channels	Metal Lath	Security Anchor
Curb Bars	Corner Bead	Expanded Metal
Wire Mesh	Stair Tread	Crimped Furring
Spirals	Bar-Tys	Bar Spacers

Catalogs on request

CONCRETE STEEL CO., 42 Broadway, New York

Southern Office: Browne-Marx Bldg. Birmingham, Ala.

Washington, D. C. Office: Woodward Building.

Norfolk, Va. Office: Board of Trade Building.

Philadelphia, Pittsburgh, Cleveland, Detroit, Denver, Kansas City, St. Louis,
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 Hartford, Chicago.

METAL LATHS
 CONCRETE
 MIXERS

BARS

EXPANSION JOINT
 CONCRETE
 SPECIALTIES

EXPANDED METAL

SOUTHERN STEEL PRODUCTS CO.,

CONCRETE REINFORCEMENT

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Laclede

REINFORCING
 STEEL

Plain Rounds, Deformed Rounds,
 Plain Squares, Deformed Squares,
 Twisted Squares

LACLEDE STEEL CO.
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Works at
 Madison, Ill., and Alton, Ill.

REINFORCING BARS

All Sizes Round & Square

METAL LATHS—EXPANDED METAL

NAILS, WIRE WALL PLUGS, WALL TIES.

VIRGINIA STEEL SUPPLY COMPANY

Incorporated

Office & Warehouse
 17th and Dock Sts.,

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REINFORCING BARS

Deformed. All Sizes. Rounds & Squares $\frac{1}{2}$ " to $1\frac{1}{2}$ "

New Billet Stock. Straight or Bent.

Warehouse or Mill Shipments.

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Kentucky Acetylene Generators
 Welding Supplies

Oxygen Hydrogen Acetylene

KENTUCKY OXYGEN-HYDROGEN CO.

Logan St. & Goss Ave.

Louisville, Ky.

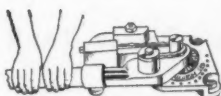
BAR BENDERS

Made entirely of Electric Steel
 Weighs only 70 lbs.

Will bend cold any size up to
 $1\frac{1}{4}$ " Rounds and 180° hooks

SEE NEXT WEEKS AD.

ELECTRIC WELDING CO.,



PITTSBURGH, PA.

American Steel & Wire Company's

Flat Wire Strip Steel

FLAT COLD ROLLED STEEL

We make up to 16
 inches in width, a
 complete range of
 gauges, finishes,
 tempers and edges,
 in coils or lengths.

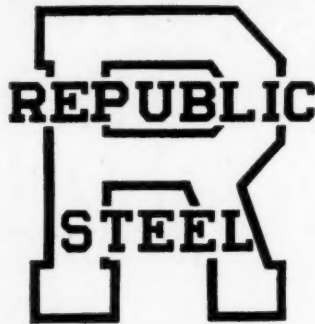
Send for our new Flat Wire
 Bulletin fully describing uses.

American Steel & Wire Company

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 CLEVELAND
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 U.S. STEEL PRODUCTS CO.

Baltimore Sales Office and Warehouse
 32 SOUTH CHARLES STREET

REPUBLIC



THE SYMBOL OF THE PRODUCT

The Republic "R" shown at the top of this advertisement has recently been adopted as the identifying symbol of all Republic products. It will be the endeavor of this company to make it represent the value of the mark, sterling.

Republic Iron and Steel Company

General Offices:

Republic Bldg. Youngstown, Ohio

Sales Offices:—Birmingham, New York, Cleveland, Chicago, Boston, Buffalo, Cincinnati, Philadelphia, St. Louis, Pittsburgh, Detroit, Dallas, San Francisco.

THE ALABAMA COMPANY

BIRMINGHAM, ALA.

Manufacturers and Producers.

Pig Iron

"CLIFTON" and
"ETOWAH" Brands.
Machine cast—Free from Sand
and Slag and uniform size
and dependable analysis.

COKE

"BROOKWOOD" for foundry
and gas purposes.
Hand picked and selected.

COAL

Steam and Coking Coals.
Washed and Sized Smithing Coals.

We are moving our products.

Why?

**The QUALITY is right and
the PRICE is right.**

DONNELLY & COMPANY

531-535 N. Fourth St.

Philadelphia, Pa.

*Prompt satisfactory service
Send us your inquiries on*

Plates, Sheets, Bars, Angles, Channels
Iron and Steel Tires Special Wire
Rubber Pads Special Channels
Metal Lath, etc.

Supplies for Builders, Contractors, Blacksmiths and
Horseshoers

IRON and STEEL

COMPLETE WAREHOUSE STOCKS

STEEL PLATE CONSTRUCTION

DESIGNERS AND BUILDERS

Blast Furnaces, Smoke Stacks, Ladles for
Open Hearth and Blast Furnaces, Riveted
Pipe, Oil Refineries, Sugar Refineries, Steel
Barges, Steel Hulls and Steel Wharf Boats

Place Your Steel Plate Construction Problems Before Us

**TREADWELL CONSTRUCTION CO.
MIDLAND, PA.**

ALAN WOOD IRON AND STEEL CO.

SAN FRANCISCO
FORT WORTH
LOS ANGELES

Philadelphia, Pa.

NEW YORK
BOSTON



STEEL PLATES

Boiler Plates, Ship Plates, Tank Plates



TENNESSEE COAL, IRON & RAILROAD CO.

STANDARD STRUCTURAL SHAPES

BEAMS and CHANNELS—6" to 12" Inclusive

ANGLES—3" to 6" Inclusive

SHIP CHANNELS and BULB ANGLES

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Buffalo
Detroit
Pittsburgh

Chicago
New Orleans
St. Louis

Cincinnati
New York
St. Paul

Cleveland
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Pacific Coast Representatives: United States Steel Products Co., San Francisco, Seattle, Portland, Los Angeles

Export Representatives: United States Steel Products Co., New York City.



"PITTSBURGH PERFECT" OPEN HEARTH STEEL AND WIRE PRODUCTS

Pig Iron
Blooms
Billets
Wire Rods
Steel Hoops

Bright Wire
Annealed Wire
Galvanized Wire
Varnished Wire

Market Wire
Barbed Wire
Twisted Cable Wire
Hard Spring Coil Wire
Steel Bands
Cotton Ties

Standard Wire Nails
Galvanized Wire Nails
Coated Wire Nails
Blued Wire Nails

Miscellaneous Nails
Poultry Netting Staples
Wire Fence Staples
Bale Ties
Automobile and Motorcycle Rim Stock

ELECTRICALLY WELDED WIRE FENCING



PROMPT SHIPMENTS Write for Catalogues and Prices. PROMPT SHIPMENTS

MANUFACTURED BY

PITTSBURGH STEEL COMPANY

MEMPHIS

PITTSBURGH, PA.

DALLAS



The Morgan Producer Gas Machine

is the highest class gas producer built in the U. S. and is advertised in this journal the first issue of each month.

Morgan Construction Co., Worcester, Mass.

Pittsburgh Office: 610 Magee Building Telephone Court 1381

ALLEGHENY STEEL COMPANY

Manufacturers of

STEEL AND CORROSION RESISTING ALLEGHENY IRON
PLATES, SHEETS, BOILER TUBES AND PIPE

Ask about Allegheny Iron

Oliver Bldg., PITTSBURGH, PA. Works: BRACKENRIDGE, PA.

SHEETS



American Bessemer—Open Hearth—Keystone Copper Steel
Black Sheets, Galvanized Sheets, Special Sheets, Corrugated
Sheets, Formed Roofing Products, Tin and Terne Plates, Etc.
AMERICAN SHEET AND TIN PLATE COMPANY, PITTSBURGH, PA.

SHARON

PRESSED STEEL COMPANY

Industrial Trucks and Trailers
PRESSED STEEL PARTS

For Railways, Motor Cars, Trucks and Tractors
Main Office **SHARON, PA.** and Works



**BUCKEYE
BLOWER
COMPANY**

VENTILATING FANS—ALL
SIZES
Columbus, Ohio.



BUILDINGS—BRIDGES STRUCTURAL STEEL fabricated for all purposes

If your requirements are
for the South, get our prices.
Largest facilities and stocks.

THE INGALLS IRON WORKS CO.

Works and Executive Offices:
BIRMINGHAM, ALA.

BRANCH OFFICES:

109 City Bank Bldg.
NEW ORLEANS, LA.
16 Exchange Place
NEW YORK CITY

228 Piedmont Bldg.
CHARLOTTE, N. C.
P. O. Box 712
DAYTONA, FLA.

Riveted Steel Plate Tanks

3/16" to 1/2" thickness
Pneumatic Water Supply,
Hot Water & Air Receivers.

HAMBURG BOILER WORKS

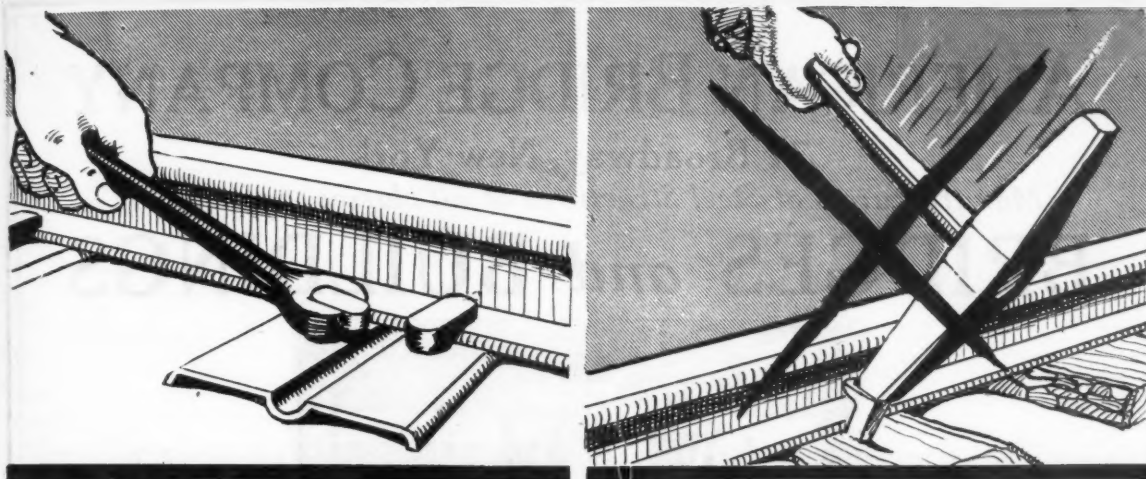
HAMBURG, BERKS COUNTY, PENNA.

THE BRIER HILL STEEL CO. PLATES — TANK, BOILER, FLANGING, FIRE BOX, ETC.

BLUE ANNEALED, BLACK, GALVANIZED — **SHEETS**

General Offices: **YOUNGSTOWN, OHIO**

CONSOLIDATED STEEL CORPORATION, NEW YORK—Sole Export Representatives



A Quarter Turn of a Wrench VS. The Laborious Swinging of a Maul

Just a quarter of a turn of the friction buttons with a wrench is all that is required to fasten rails in place when Cambria Steel Mine Ties are used. Compare this simple effort with the time and labor involved in driving spikes in cramped quarters when wooden ties are used.

Cambria Steel Mine Ties make the job of taking up track just as easy as laying it.

There are many other advantages to be gained by using these ties, among them being the following.

- (1) Fewer ties are required than when wooden ones are used.
- (2) Cambria Steel Mine Ties are light and easy to handle. One man can easily carry half a dozen and two men can carry an entire section of track.
- (3) Cambria ties are complete in themselves. There are no loose parts to get lost.

Detailed information will be sent on request

**MIDVALE STEEL AND ORDNANCE COMPANY
CAMBRIA STEEL COMPANY**

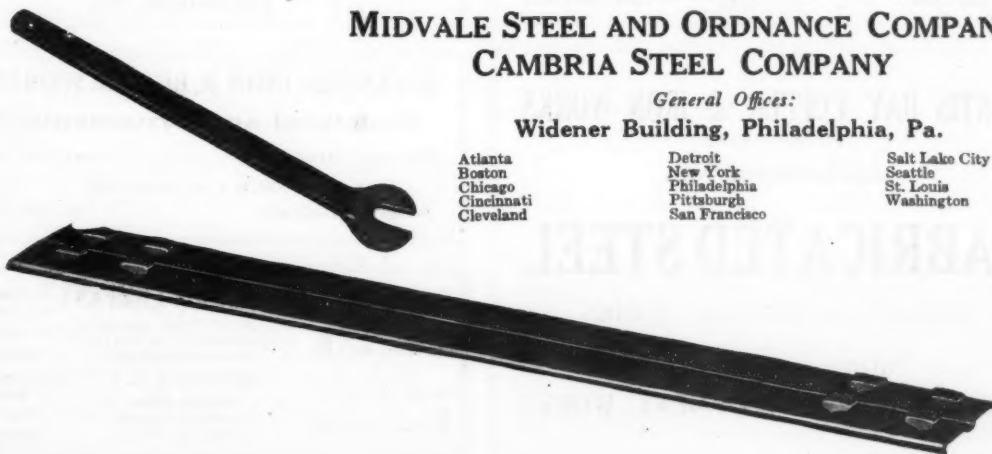
General Offices:

Widener Building, Philadelphia, Pa.

Atlanta
Boston
Chicago
Cincinnati
Cleveland

Detroit
New York
Philadelphia
Pittsburgh
San Francisco

Salt Lake City
Seattle
St. Louis
Washington



AMERICAN BRIDGE COMPANY

71 Broadway, New York

Manufacturers of Steel Structures of all classes, particularly

BRIDGES and BUILDINGS



HEROULT ELECTRIC FURNACE

We also furnish and install

HEROULT ELECTRIC FURNACES of ONE, TWO, THREE, SEVEN, TEN, FIFTEEN and FORTY GROSS TON CAPACITIES

OFFICES IN PRINCIPAL CITIES

INTERNATIONAL STEEL & IRON CO.

Department 16
EVANSVILLE, INDIANA



WAREHOUSE AND FABRICATING PLANT—EVANSVILLE, IND.

IRON AND STEEL

STANDARD AND BETHLEHEM
Carried in Warehouse Stock for Immediate Shipment
STEEL for BRIDGES and BUILDINGS
FABRICATED PROMPTLY

Elevators
Cornice and Skylights
Steel Ceiling

STORE FRONTS
WRITE FOR GENERAL
CATALOGUE

Millwork and Glass
Ornamental Iron
Curtain-rod Roofing

Design

Manufacture

Erect

STEEL and IRON FOR BUILDINGS AND BRIDGES

RICHMOND STRUCTURAL STEEL CO.

Estimates Cheerfully Furnished.

Richmond and Norfolk, Va.

STRUCTURAL STEEL

for Buildings and Bridges
PROMPT SHIPMENT

JOHN EICHLEAY JR. CO.
Pittsburgh, Pa.

CURTIS BAY COPPER & IRON WORKS

INCORPORATED

BALTIMORE, MD.

FABRICATED STEEL

BUILDINGS, BRIDGES, TANKS

GENERAL MACHINISTS

MODEL AND DEVELOPMENT WORK

ROANOKE IRON & BRIDGE WORKS, Inc.

Structural and Ornamental Iron

Wrought Steel Fences

Gray Iron Castings

FROM 1 TO 10,000 LBS.

Write for Estimates

ROANOKE, VA.

Concrete Specialties

THE WILSON COMPANY

Representing

HAVEMEYER
STEEL BARS

COMPLETE STEEL AND IRON
REQUIREMENTS FOR BUILDERS
AND CONTRACTORS
GREENVILLE, S. C.

THE DOW COMPANY
Louisville, Ky.

STRUCTURAL STEEL
Ornamental Iron
Wire Grilles
Pipe Railings
Bronze Tablets

"Easy" & "Ala. City"
BASIC SLAB
Crushed & Screened

Branch Office
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Charlotte, N. C.

Snead Architectural Iron Works

LOUISVILLE, KY.

**STRUCTURAL STEEL
ORNAMENTAL IRON**

Immediate Shipment of all
Standard and Bethlehem Shapes

EITHER PLAIN OR FABRICATED

THE PHOENIX IRON CO.

MANUFACTURERS OF OPEN HEARTH

Structural Steel Shapes, Beams,
Channels, Angles and Ship Shapes

Works: Phoenixville, Pa.

Main Office: Philadelphia, Pa.

OFFICES:

22 S. 15th St., Philadelphia
Munsey Building, Washington
C. of C. Bldg., Rochester

132 Nassau Street, New York
110 State St., Boston
26 Victoria St., London

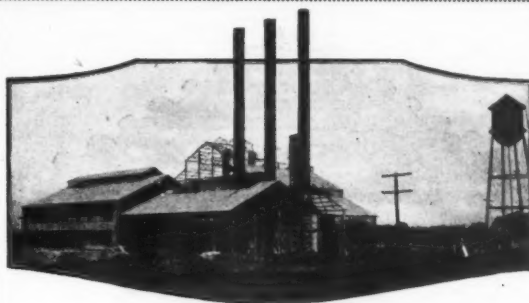
THE PHOENIX BRIDGE CO.

Engineers, Fabricators and Erectors
Bridges and Other Structures of Steel

CAPACITY 60,000 TONS

Works and Engineering Office:

Phoenixville, Pa.

**Mirrored Afar**

Build it
of Steel
for strength
and durability

PARTICIPATION in many
notable foreign projects
simply reflects our good works
at home and the confidence of
buyers generally

Above is a large Sugar Factory recently built in Honduras, C.A., for the Cuyamel Fruit Company by The Dyer Company, Cleveland. We furnished the steelwork—over 700 tons.

Virginia Bridge & Iron Co.Roanoke
AtlantaMemphis
New OrleansBirmingham
Dallas

VIRGINIA BRIDGE
STEEL STRUCTURES

CHAMPION BRIDGE COMPANY

WILMINGTON, OHIO

MANUFACTURERS OF

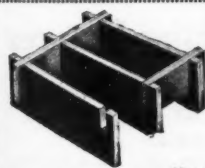
Bridges and Structural Work

Southern Office—Atlanta, Ga.

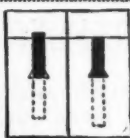
**Fabricated
Steel
Structures**

Tanks, bins, bunkers,
stacks, gas mains, piping
producer gas plants and
tar extractors.

Completely equipped pattern shop, gray iron foundry
and machine shop for medium heavy work

THE SMITH GAS ENGINEERING CO., DAYTON, OHIO**"MITCO"**
INTERLOCKED
GRATINGS

No bolts. No rivets. No
bent metal. No clogging.
Every joint locked by
metal spread in dovetail.
Write for data.



Mitchell-Tappen Co., 15 John St., N. Y.
Also makers of Standardized Metal Coatings ("B.M.O.")

**CONVERSE BRIDGE & STEEL CO.
STRUCTURAL STEEL**

For

Industrial Buildings, Mines, Refineries,
and the Building Trade

CHATTANOOGA

TENNESSEE

BELMONT IRON WORKS

Engineers Contractors Exporters

Structural Steel and Steel Lumber

Complete Industrial Buildings

**FARRIS BRIDGE COMPANY**

Bridges, Coal Tipples, Mill Buildings.
Toll Bridges Financed and Built.

At pre-war prices

CHARLESTON, W. VA.

CUMBERLAND, MD.

DIETRICH BROTHERS

Structural and Ornamental Iron and Steel Works

Large Stock of Standard and Bethlehem Shapes

CONCRETE REINFORCEMENTS

BALTIMORE, MD.

Steel Buildings & Bridges

Annual Capacity 400,000 Tons

Write for Booklet

McClintic-Marshall Co.
Pittsburgh



Adaptability

The adaptability of "Perfect" Double Crimped Wire Cloth embraces every possible screening operation in modern milling practice.

Regardless of the service we can supply screens to economically meet every requirement. Any size of wire and mesh and any desired metal. We make screens ranging from 1-inch steel bars down to fine metal fabrics of a texture almost as fine as cambric. And regardless of how coarse or how fine, they all have the same double crimp feature of construction.

THE LUDLOW-SAYLOR WIRE CO.
ST. LOUIS, MO.

Branch Offices:
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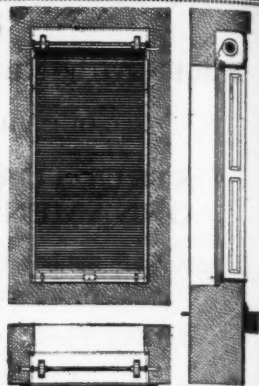
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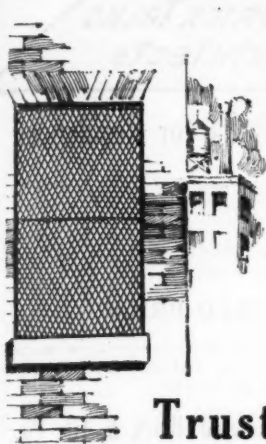
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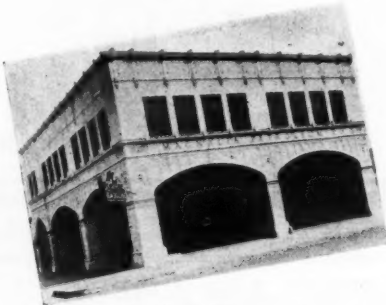
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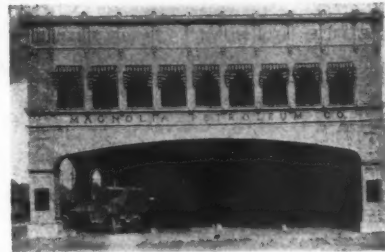
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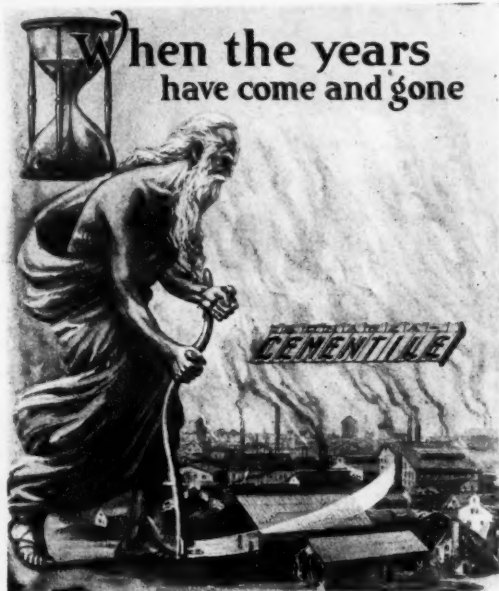
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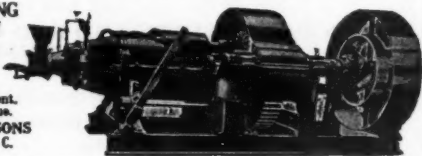
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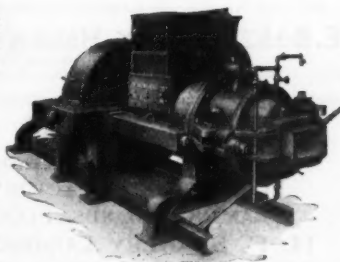
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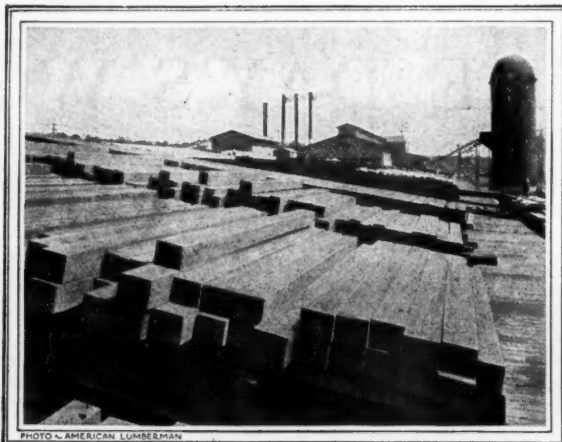


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Stiffness	100.0	82.0	85.5	100.0
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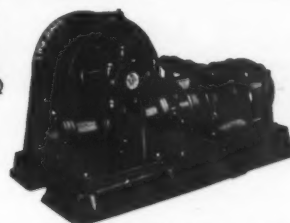
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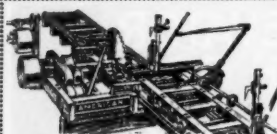
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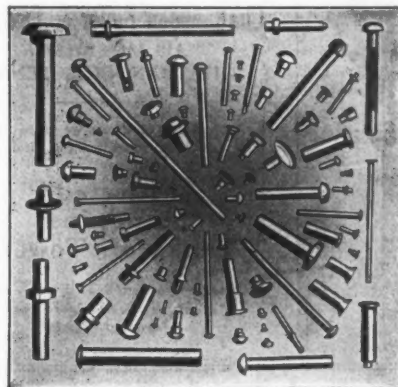
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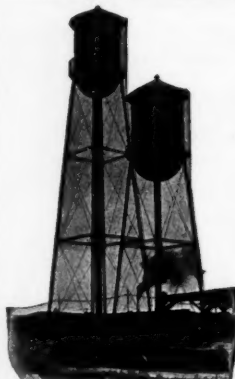
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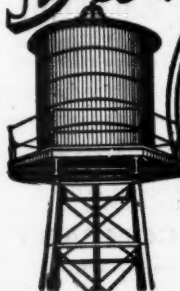
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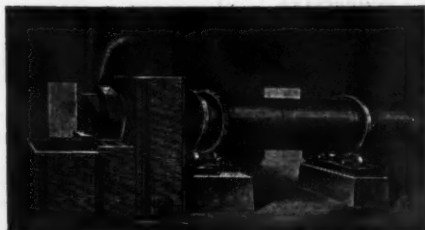
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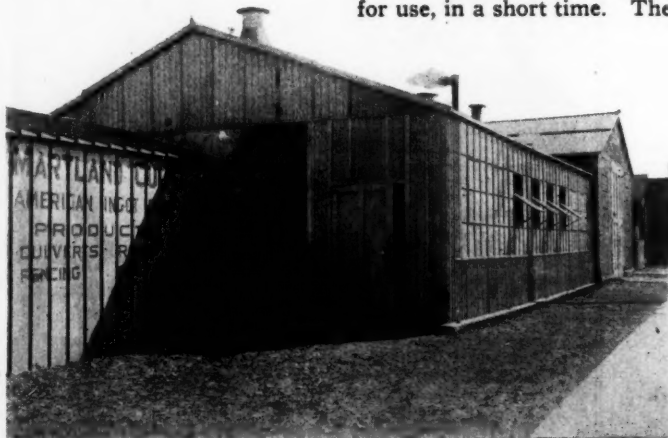
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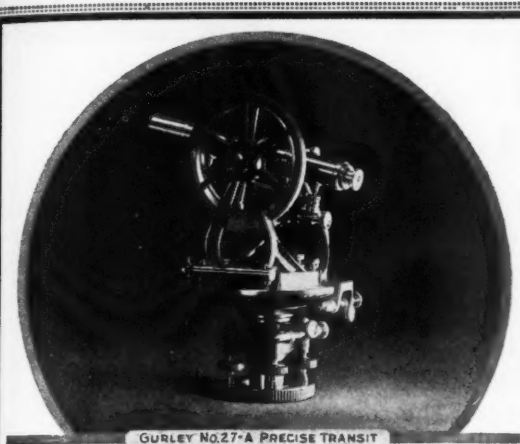
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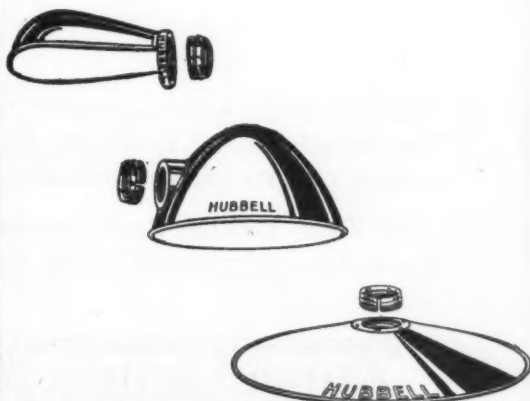
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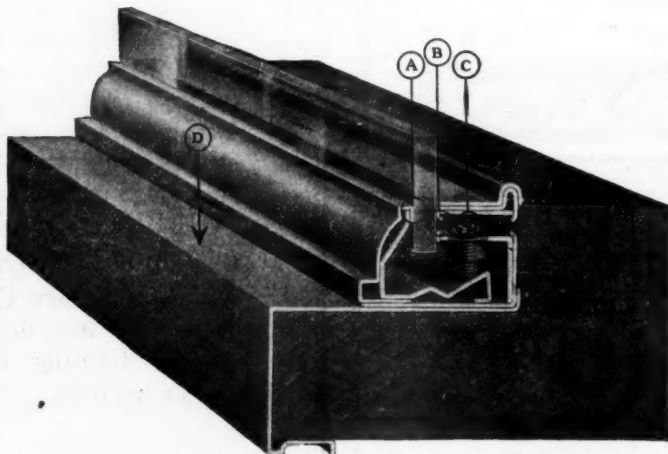
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Exponent of America

DECEMBER 28, 1922

Volume LXXXII

Table of Contents

Number 26

1922-1923 Cover Page

EDITORIALS

47-54

Our New Year Wish.
The Outlook for the New Year.
Good Wages Make for General Prosperity.
Making the South Known.
Record Exports for November Complete Refutation That Present Tariff Law Would Destroy Foreign Business.
We Stand at the Threshold of a New Era.
Is the Nation Drifting Into Dangerous Class Divisions Because the Problems of the Farmers Are Not Studied or Understood by Bankers and Big Business Interests?

Growing Antagonism to Federal Tax on Securities Issued by the States.
The Curse of Maryland's Race Track Gambling.
Some Southern Bankers Voice Their Views.
If Workers Were Given the Facts About Business Much Industrial Unrest Would Become a Thing of the Past.
Why Not Tell the Truth?
An Advertiser's View.
Our Brothers.

NEWS ARTICLES

Statement of Federal Reserve Board Announcing a New Policy	55
Some Curiosities of Our International Trade	56
Expanding Hydro-Electric Developments in the Ozarks.....By Tom Shiras	57
Monopoly Vs. Democracy in Banking.....By Andrew J. Frame	59
Recently Completed Plant of United States Sheet and Window Glass Co. at Shreveport, La.....	62
The Fight Against Boll Weevil and Its Relation to Cotton Prices and the Supply of Calcium Arsenate	62
Hogs "Mop Up" the 150 Acre Sweet Potato Patch After Best of Crop Has Been Taken.....	65
Hopewell Adding to Its Industries.....	67

DEPARTMENTS

The Iron and Steel Situation.....	69	Construction	77
Railroads	70	Machinery, Proposals and Supplies Wanted	87
Good Roads and Streets.....	71	New Financial Corporations.....	90
Lumber and Building Materials.....	72	New Securities.....	90
Textile	75	Trade Literature.....	91
Mechanical	76	Industrial News of Interest.....	91

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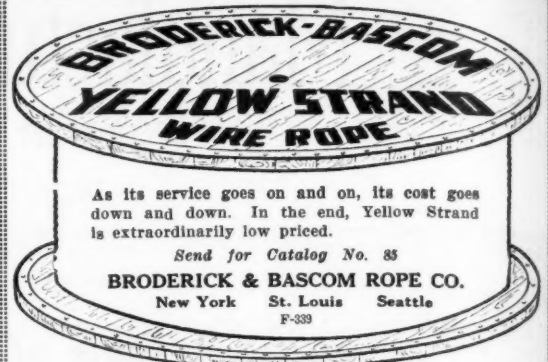
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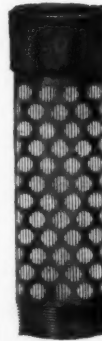
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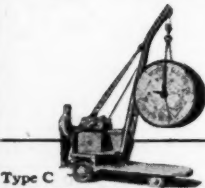
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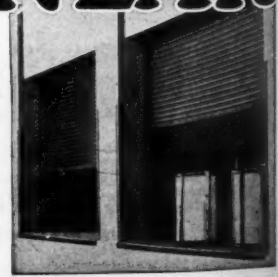
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WEEKLY.

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In order to avoid delays all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

OUR NEW YEAR WISH.

TO all our readers, friends and enemies alike, we extend our New Year greeting with the wish that where honor and honesty prevail there may be abounding happiness and prosperity.

To those who are honestly pursuing an honest business we extend the hand of good fellowship and the hope for a year of success.

For those who are pursuing a dishonorable business, whether they be law violators through the selling or the buying of bootleg whiskey, or law violators of any other kind, we extend the hope that there may come to them such a burning sense of shame, and such an unceasing biting of an awakened conscience that they may cease to exert their influence for individual and national destruction as they are now doing, and become upholders of law, and honor, and integrity, and morality. For them we would express the hope that ere they send their own children by their example down the road of law breaking and immorality to a hell here and a worse hell hereafter, they may turn unto better things and to a higher life.

Every law breaker is to the extent of his influence a co-worker with the devil in bringing on a condition which leads to robberies, to immorality, and to murder.

May the New Year drive home to every reader who is a law breaker this truth until it sinks deep down into his innermost soul!

To every honest man who is seeking to obey the laws, whose influence is aggressively for morality and for honor and honesty in business, we would express the sincere hope that the New Year may bring abounding blessings of health, happiness, and prosperity.

THE OUTLOOK FOR THE NEW YEAR.

WITH the increase of about \$2,000,000,000 in the value of agricultural products of this country this year as compared with the value of last year and a fair degree of certainty that prices of farm products will continue to advance, the agricultural interests of the country are moving forward toward a period of larger prosperity than they have had since the breakdown of business by deflation. To this great advance, giving to the farmers and to the country two billions of dollars of purchasing power over last year's crop values, will be added the broader spirit that now dominates the Federal Reserve System which is practically reversing the policy of the past that brought on destruction and which promises to be a helpful instead of a destructive influence for the good of the agricultural interests of the country, and thus for the good of every other industry.

With the railroads crowded beyond their capacity to carry the freight that is offered, we have a condition which will literally compel them vastly to increase their track, their rolling stock and their terminal facilities. This economic situation will prove that necessity is the mother of invention, and it will inevitably bring about an enlargement of transportation facilities more nearly adequate to the needs of traffic. In this we have the assurance of busy times for steel rail mills, locomotive plants and car works and all other lines of industry which produce railroad equipment.

With a better handling of our financial system making it creative rather than destructive of business, an upbuilding power rather than a tearing down one, the country can go forward with the assurance that not for many years at least will any combination of bankers dominating the Federal Reserve System dare to put into effect another effort to break down prosperity. The interests which brought about the destructive policies of the Board in the past are now beginning to see that they played with fire and brought about the danger of a conflagration against which they could not stand.

President Harding's administration is to be commended for the complete reversal of the Federal Reserve methods and for the upbuilding forces which are now at work even though these changes were too long delayed. But there are few who comprehend the tremendous power of the influences which were seeking to prevent the changes that President Harding's administration has succeeded in achieving.

Looking broadly over the whole situation there is the promise of a steady expansion in business, of larger traffic facilities, a larger volume of traffic and a new prosperity to agriculture which means an increased buying power that will start the wheels of many an idle industry and give courage and confidence to business everywhere.

We are breathing a new atmosphere of business optimism as against the deadly miasmatic atmosphere of pessimism which sent many an industry and many a man into an untimely grave of bankruptcy or death. Hope springs eternal in the human breast and this time hope is founded on a solid

basis which gives assurance that as we close the Old Year we may forget its hardships and its disappointments in the thought of the larger prosperity which the New Year will bring to the whole country.

GOOD WAGES MAKE FOR GENERAL PROSPERITY.

IN an address at Washington, Julius H. Barnes, President of the Chamber of Commerce of the United States, declared that wages will never return to the pre-war level and took the position that an economic system that can give us more for everybody, more automobiles, more general education, more modern plumbing, more graphophones and bigger real wages, is a system worth maintaining and worth fighting for.

That is exactly what the MANUFACTURERS RECORD has been saying for years. A cheap coat makes a cheap man. There is no statesmanship in driving prices and wages down to Chinese levels. The test of our economic system is to provide the masses of the people with good wages so that they may obtain a fair share of the good things our civilization is producing. We do not lament the fact that some laboring men travel to work in their own cars. It would be a better country if they all did.

There is no greater fallacy than the assumption that a large part of the people must always be poor and put up with hardships.

MAKING THE SOUTH KNOWN.

North American Advisory Committee,
Brazilian Centennial Exposition,
Rio De Janeiro, 1922-1923.

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As one who has devoted a number of years to publicity and general propaganda for effecting good will in industry or the acquisition of new business, whether for railroads, banks, or commercial enterprises, I wish to say that I consider your recent advertisement in "Printers Ink" one of the most forceful arguments for the South I have ever seen.

Every native born Southerner, or present resident of the South should join in grateful praise, and be filled with gratitude that it has such an able exponent as you have for years proven yourself, and through you, the MANUFACTURERS RECORD, in its valuable work in upbuilding the South.

In our country's mighty march of progress, the South, long recognized "as the greatest undeveloped asset of America," is now rapidly becoming the greatest developed asset. I consider the MANUFACTURERS RECORD as its greatest exponent of progress. It is being more recognized in the North as the authoritative source of information and Southerners interested in attracting working capital from the financial marts will do well to let it be known through that publication. Its standing carries with it the stamp of genuine opportunity obtainable through no other source.

The present is conceded the most opportune time ever known for those interested in the progress of the South to bring to the attention of the balance of the United States its opportunities for profitable development, establish goodwill and cordiality with interests elsewhere which have idle capital awaiting knowledge of profitable investments. The South is full of attractive natural resources awaiting the chance to be converted into profit. Just at this time every dollar spent through the MANUFACTURERS RECORD is destined to bring ten fold the direct and prompt results that the same publicity would have brought a few years back when "Go West Young Man" was the popular slogan.

As a native of North Carolina I bid you read Deut. VIII: 7, 8, 9, which exactly describes the present South.

HARVEY HOLLEMAN.

The verses in Deuteronomy to which Mr. Holleman calls attention have often been quoted by the MANUFACTURERS RECORD as perhaps the best description ever written of the South.

To the verses mentioned by Mr. Holleman, namely, 7, 8 and 9, we would add verse 10. These verses read as follows:

For the Lord thy God bringeth thee into a good land, a

land of brooks of water, of fountains and depths that spring out of valleys and hills.

A land of wheat, and barley, and vines, and fig trees, and pomegranates; a land of oil, olives, and honey;

A land wherein thou shalt eat bread without scarceness, thou shalt not lack any thing in it; a land whose stones are iron, and out of whose hills thou mayest dig brass.

When thou hast eaten and art full, then thou shalt bless the Lord thy God for the good land which he hath given thee.

RECORD EXPORTS FOR NOVEMBER COMPLETE REFUTATION THAT PRESENT TARIFF LAW WOULD DESTROY FOREIGN BUSINESS.

A new high record for the year in American exports was made in November, according to official figures of the Department of Commerce. Returns from all customs districts show that American agriculture and industry benefitted from export business aggregating \$383,000,000 during November. This is approximately \$90,000,000 higher than the value of shipments during November, 1921. It is \$12,000,000 more than the value of exports in October, which was the best previous month on record for the present year, and about \$70,000,000 greater than September. Comparing November, 1922, with the same period of 1913, an increase of more than \$138,000,000 over pre-war shipments abroad is pointed out by the Department of Commerce.

The aggregate value of exports for the eleven months ending with November was \$3,490,345,750 which is about \$68,000,000 less than the value of similar exports for the corresponding eleven months of 1921. However, comparing the total value of exports for the corresponding eleven months of pre-war export values, it is seen our exports are running in excess of what they were in former normal times. In eleven months we have exported \$3,490,345,000 worth of merchandise, or an increase of more than \$1,000,000,000 over the value of the country's exports for the whole twelve months of 1913.

Considering the world's unsettled business condition and the practical collapse of exchange, we are actually moving a record volume of exports. It is a complete answer to those who asserted that our tariff would destroy our export business. Europe is buying American merchandise since the tariff law became effective and will continue to do so.

As the Department of Commerce recently stated, we export 50 to 60 per cent of our cotton, 25 per cent of our wheat, and about 60 per cent of the lard and 15 per cent of other pork products manufactured in slaughtering houses. These are the four great surplus products of the country's farms, and may be considered key products. The price of wheat is generally believed to affect more or less the relative price level of other cereals. The price of pork products without doubt directly affects the price of corn, while the price of cotton controls the whole economic situation in the cotton belt and indirectly exercises a wide influence in other sections. With these three great key products controlled by international price levels, we see how intimately the economic problem of American agriculture is tied up with foreign trade and the economic problems of the whole world. Even those products that enter very little into international trade are nevertheless controlled by world price levels more than is generally known.

Western Europe takes about 90 per cent of the surplus agricultural products of the world, of which Great Britain takes approximately one-fifth. The study of world supply and demand, therefore, becomes a matter of studying the effective demand of Western Europe on the one hand and the available surplus in the four principal exporting countries of Canada, United States, (which furnishes approximately one-half), Argentina, and Australia, on the other.

We Stand at the Threshold of a New Era.

THE truth will out.

Two years ago, and for months before, when this country was in the throes of the most disastrous economic and commodity panic it had ever known with banks failing, great business houses going into bankruptcy and agriculture prostrate from one end of the country to the other, with the savings of a lifetime wiped out for many industrious citizens and producers everywhere stricken by panic fear, we stated over and over again, with all the emphasis of which we were capable—and proved our contention—that the Federal Reserve Board, by the adoption of an arbitrary, autocratic, ignorant and ruinous policy of credit restriction and currency contraction was father and mother to the resulting chaos, which it had conceived and given birth to; that no relief could be expected until the men responsible for that policy had been kicked out of office or brought to their senses, and that a return to normalcy could be expected only when and if the Federal Reserve Board first became itself normal and adopted normal policies. Ours was as a voice crying from the wilderness. We were condemned by powerful banking interests, we were accused of being demagogues. The Governor of the Federal Reserve Board travelled about the country and exhibited charts to prove that the Board was not guilty and that the contraction of credit was the consequence, not the cause, of the agricultural and general collapse.

We now bring the testimony of the Federal Reserve Board itself, as at present constituted, in incontrovertible proof of the accuracy of our accusations. Elsewhere in this issue we print the official statement for the press as to the latest and almost revolutionary policy of the Board. This official statement says:

"That the Federal Reserve Board is greatly interested in the co-operative marketing movement and has sought every opportunity to assist the organizers and managers of such associations to work out the best means of arranging their financing so that it should not only be sound but should also enable them to obtain the lowest interest rates for necessary credit is indicated by the **number of very liberal rulings on this subject which the Board has issued during the past eighteen months.**"

During the past eighteen months! There is the rub. It is the deliberate and official pronouncement by the Board itself that previous to eighteen months ago, during all that period when prices everywhere were so low that they were bankrupting the farms of the nation and almost every branch of industry, liberal rulings were unknown. When most needed they could not be got. The Board was sitting tight, fiddling while Rome burned, refusing to do anything whatever to relieve the situation, rejoicing rather in what it called the thawing out of frozen credits, driving business after business and man after man to the wall, peremptorily refusing to apply any of the relief measures which, now confessedly, it was within the power of the Board at all times, in all circumstances, to have applied.

The champions of the policy of drastic deflation, the gentlemen who undertook to defend it before the public, in the Senate and elsewhere, persistently and defiantly advanced the proposition, in the words of one of them, that the Federal Reserve System was moving serenely on, promptly meeting

every demand for commercial and agricultural credits that are within the sanction of the law. But now the Federal Reserve Board itself comes into the open and officially announces that for the past 18 months only has it been liberal. Before that, in the time of greatest stress, it knew not liberality and liberality knew it not.

Nay, more. Now, in this announcement as of December 20, it makes the almost revolutionary announcement that it will hereafter recognize as eligible for purchase by Federal Reserve Banks "acceptances with maturities up to six months which are drawn by growers, etc." What does that mean? We quote from the official statement: "If the grower desires to do the borrowing himself he can draw a draft on the co-operative association at the time he delivers his crop, the association accepting it. He then discounts the draft at his local bank, which under the Board's ruling may then rediscount it at a Federal Reserve Bank as agricultural paper with a maturity up to six months."

The official statement goes further. It shows that there was considerable discussion inside the Board before this ruling was decided on, with the old crowd of prosperity-wreckers evidently arguing that the ruling was too liberal and that the grower ought not to be allowed a six months maturity because he might use the money to pay debts. But the more decent and intelligent elements in the Board, it seems clear, insisted that under such an interpretation, "very little credit" could be obtained by the farmer. They wanted him to get the credit he ought to have, so they threw overboard the whole narrow-minded opposition and determined, as ought to have been determined three years ago, that as the object was to finance crop movement, not to bankrupt the farmer, the law would be construed in a straightforward way and not as an instrument of destruction.

Nor were the elements of rehabilitation in the Board content merely to go that far. They ruled also that the paper of a grower, as above described, "is a bill of exchange drawn in good faith against actually existing values", on which account it is not subject to the 10 per cent limitation. Thus ruling "permits the rediscount of such paper in **unlimited amounts.**"

Had such a ruling been in effect in 1920, when the law was just what it is now, there would have been no commodity panic in the United States, some billions in value which have been destroyed would not have been wiped out, Liberty bonds would never have dropped far below par and the return to normalcy would have been normal.

Let intelligent men compare this present attitude of the Board with the circular letter No. 94, sent out by the Federal Reserve Bank of Richmond under date of December 20, 1919, wherein appeared this statement: "Our present task, therefore, is to proceed with the deflation of credits as rapidly and as systematically as possible." Contrast it with the attitude of the Treasury in December, 1920, when on the eve of the most dismal Christmas many Americans had ever known, the Secretary of the Treasury, Mr. Houston, was moving heaven and earth to prevent the revival of the War Finance Corpora-

tion, the activities of which have since been of incalculable value to the country, with no losses.

Why, it may be asked, is the present official statement of policy so obviously anxious to set 18 months ago as the time when a more liberal policy began to be controlling? We think the answer will be found in a statement issued from the White House at about that time, wherein the Administration publicly declared that perhaps the most valuable of its achievements up to that time had been the bringing about of a reduction of the rediscount rate. June 9, 1921, just about eighteen months ago, we said editorially:

"Another fundamental policy of Governor Harding involved the forced liquidation of farm products and the continuance of the stranglehold on the credit of the nation. On that, too, he has been overruled. Already a lowering of the rediscount rate has occurred. It is an open secret that it is to be followed by other and additional decreases in the rate. In anticipation of these, Governor Harding himself has been junketing about the country trying to explain how the change in conditions has at last made it possible for the Federal Reserve Board to loosen up. It is not any change in conditions which is responsible. It is the change in the personnel of the gentlemen now responsible for the financial administration of the country, who were not long in letting Governor Harding know that he must sing another tune, and sing it cheerily. There was no intention on the part of the Administration to permit this supreme destroyer of confidence and credit to continue on his way unimpeded."

In our issue of June 16, 1921, we pointed out that "the Federal Reserve Board has been forced by the Administration to reverse its tactics and begin to loosen up on credit." Again, on June 23, 1921, we stated:

"We say these things are a national scandal. Who does not know it? The Administration does, for it has so admitted. It ordered Governor Harding to put out a reassuring statement June 5 promising renewal of agricultural loans and further consideration. It ought to have come from another mouth. Men have not confidence, we regret to say, in what Governor Harding says."

So the Board is eminently correct now when it says that about 18 months ago it began to adopt more liberal policies. We were fortunate in being able so to advise our readers at the time. But let it be noted that the most liberal of all its rulings, as particularly this latest one, have come SINCE GOVERNOR HARDING GOT OUT OF OFFICE. If it be true, as we believe to be the case, that these liberal rulings were adopted only after a division inside the Board, it is even more likely that they could not or would not have been adopted had Mr. W. P. G. Harding been sitting at the head of the table and presiding over the meetings.

Whatever his capacity for agreeing with the immediate other high authority in the Treasury, his financial cosmos is so composed that liberality of credit is beyond its appreciation.

We have been asked why we have insisted so vigorously on the ousting of Mr. Harding from the Governorship. It has been pointed out to us that he was merely a pawn for more intelligent masters; that it was the system, not the administrator, that was chiefly to blame. That is true enough, but Mr. W. P. G. Harding came to mean in the public mind everything culpable in Federal Reserve Administration. He was the one who caused it to lose the confidence of the country and plunged it into the maze of politics. If, however, any justification were required for our insistent demand that he be kept out of office and not reappointed, it is found beyond all question of conjecture in the fact that four months after his retirement, the Board makes the ruling it last week an-

nounced. Credit began to be freed when the Board was freed of Governor Harding.

We are aware, of course, that the new policy of the Board relates to financing agriculture through the co-operative associations primarily. We are fully cognizant of the fact that this revision of administration does not strike at the fundamental faults in the Reserve System itself, and we are not by any means so naive as to think that a panacea for credit restriction has been found, or that a satisfactory system for rural credits has been arrived at. What is happening is that outstanding defects of administration are being corrected. That in itself is a tremendous gain. It is positively inspiring.

On the other hand, we doubt if the purpose is the confusion of the farm credit legislation situation at the Capitol, as some maintain. We think the primary object of the Administration, operating through the Federal Reserve Board, is to revive confidence in the United States and save immediately, so far as possible, the agricultural situation by giving producers such access now to Federal Reserve facilities as they ought all along of right to have had.

The immediate effect of the rulings will be to give the co-operative associations practically unlimited financial resources with which to market, in an orderly and scientific way, such parts of the present crops as have not been already sold. This will be of particular value to the South, where the co-operative selling of cotton has made great strides forward. The co-operative associations will not have, in any case, to appeal to the War Finance Corporation for funds. They will be able to secure all they need directly through the Federal Reserve Banks, as wise financiers all along have been contending should be the case. It will not be necessary to dump the whole cotton crop on the market at one time. It can be distributed as the consuming trade requires it, irrespective of the speculative markets. This raises a sort of barricade against drastic price declines and leads such a stability into prices as has not formerly existed. Moreover, this great result will be achieved without departing in the slightest from the principles of sound banking. It is an altogether desirable thing.

Agriculture has been, and in some respects still is, in a most discouraging and depressing condition. But if the terrible agonies through which it has passed these last three years results, as seems probable, in the adoption by this nation of a definite national policy as to agriculture, the foundation of which shall be a fixed determination that the farm shall not be sacrificed to purely industrial interests, so that desirable men can remain on the land with some prospect of earning therefrom a decent living and so that farming shall not be turned over to a race of serfs, then it may be that in the long run the sacrifice will have been in some respects worth while.

We do indeed stand at the threshold of a new era.

THE AGRICULTURAL SOUTH BECOMING THE MANUFACTURING SOUTH.

MR. ARTHUR A. OLIVER, manufacturers' agent, of Orangeburg, S. C., presents one thought in regard to high freight rates to which we have previously referred. In the course of his letter he says:

"Your journal occupies a unique position in the business world and it shall be valued the more by the entire country as it becomes more extensively read. The Agricultural South is also becoming the Manufacturing South and while we all deplore the high freight rates yet that very thing is operating to the advantage of the South by localizing the purchases of the Southern merchant and general public rather than sending so far away and suffer the high transportation charges."

Is the Nation Drifting Into Dangerous Class Divisions Because the Problems of the Farmers Are Not Studied or Understood by Bankers and Big Business Interests?

THE safety of the country depends upon a better understanding between the city consumers of foodstuffs and the farmers who produce these foodstuffs.

Blindly, without understanding the situation, the consumers denounce the farmers and demand lower cost of food. Union labor demands an 8-hour day with slackness in efficiency and high wages, while protesting against the cost of food, ignoring the fact that if farmers and farm laborers worked only eight hours a day the country would face a food famine and prices would be at least double the present figures.

Big business interests failing to appreciate the seriousness of the situation make no real effort to change these conditions and thus the country drifts toward a spirit of hatred on the part of the producers and the consumers of foodstuffs which must be eliminated if we are to be saved from dangerous national trouble far greater than any we have had.

In this question is involved the matter of freight rates which are entirely too high for the safety of the country regardless of what railroad managers and bankers may say. Present rates cannot and should not be maintained for they mean a far greater loss to the country than all the possible good that could come from the prosperity of the railroads.

A way out of freight rate difficulties and the depression in agriculture and the conditions thus created must be devised or the hostility to railroads and to the banking interests will make the free silver fight of 1896 seem like a spring zephyr as compared with an equinoctial storm.

Merely to give our readers a chance to see how the farmers are feeling we publish the following as typifying the spirit abroad in the land:

Salem, Mo.

Editor Manufacturers Record:

I have just finished reading your open letter to John D. Rockefeller, Jr. In that letter you state many plain facts that any intelligent citizen should have seen. Of course the farmers have realized this for several years. But our bankers and manufacturers and big business seem to have been blind to the situation. Agricultural journals either have not seen it or are afraid to mention it. Your short letter says more in the interest of the farming class than all the farm papers have said in the last 20 years and still you don't claim to be a farmer. A copy of your letter should be in the hands of every congressman and senator in the United States.

You voiced the greatest danger that now confronts the people of the United States. For four years we have had it dinged into us about the high cost of living and the people of the towns and cities have looked on the farmers as robbers and yet, they can't pay their hands and taxes out of what they and the hired man produces, yet big business thrives and declares stock dividends from 20 to 2000 per cent.

A traveling man for a plow manufacturing company which is still advancing prices was cursing the farmer for not buying more machinery and fertilizer to build up his soil and said he could do that while sitting around. If you take 16 hours from his day of 24 the farmer don't have much time left while its light to work. But this salesman seemed to think 8 hours was too much for a farmer to rest. Thank you for the article and for the nerve you had to publish it.

H. L. HODGES,
Farmer.

Keith Farm,
Caledonia,
B. F. KEITH, Proprietor.

Currie, N. C.

Editor Manufacturers Record:

I sincerely trust that you will help get us out of the jaws of the money trust, the Aldrich-Wilson Federal Reserve Act, that has given the 12 regional banks completely into the hands of international bankers and their coerced banks that

own the stock in the regional banks, their bank credits guaranteed by the government, which is managed by picked men or servants of the controllers of these banks, which are winding the web of oppression around every man, chick and child, so completely, that we have all—especially the farmers the producers of wealth—are no more than chattel slaves and fast becoming Russianized in sentiment.

How long will the masses stand for it? No longer than they fully understand what the trouble is. Our Congress has either been ignorant of what they have allowed or those who knew better have acted as traitors to their country and people, by giving over to a few bankers and gamblers, the rights and duty of Congress to issue its currency direct to the people (not to the few gamblers and money worshippers to enslave the masses for the greed of the few). The people will not stand for it 90 days once they find out the fraud that is being put upon them, and they are fast finding out the truth. They will keep up the false fight on matters of small importance, that is the servants of the robbers, trying to divert the minds of the people from the real trouble, but they can't fool the people any longer if honest men will now stand, together as they did in 1776 and fight to save our country from the enemy whose God is more gold if need be to put us in another World War. But Russia's oppressors ought to teach them a lesson.

Our taxes are climbing higher each year, our ability to pay is less each year, now the remedies first for our Government to issue money direct to the producers, either through co-operation, controlled by farmers and producers at the same rate of interest as the big banks pay. Money by the Government is what it stamps as money the \$1.00 units, good for all debts in U. S. This must be taken out of the hands of the present bankers and given direct to the producers, then they can have their own storage plants, packing houses, factories, if need be, to manufacture their own raised products. They would not need Government aid long—besides they could reduce prices to consumers 33½ to 75 per cent and all would share in its advantages except the gamblers who through the national banking system now augmented by the Federal Reserve Fraud lending its credit, not money, drawing near 100 per cent each year and making all classes poorer each year. The robbers for nearly 70 years will call this plan special legislation, radical, etc., but we expect nothing else than their cry from oppressors for 69 years to cry thief, stop him, but doesn't realize it is himself for all these years.

I see that Wall Street has another scheme to fool the farmers through their man Eugene Myer. Baruch, Warburg, Morgan, and other New Yorkers have had a call made to the Co-Operative Marketing Association of the South to meet in Washington, to give them a better banking system; they see the handwriting on the wall, and are trying to head off the Ladd bill in the Senate.

I trust you will be there and do all you can from keeping any new bill from being in the hands of the present bankers and their tools and at interest rate not more than bankers pay on long time from the Government direct.

B. F. KEITH.

S. H. GAITSKILL,

Breeder of Shorthorn Cattle and Duroc Hogs,
McIntosh, Fla.

Editor Manufacturers Record:

In your discussion of Henry Ford and Muscle Shoals, November 16, you stress wages as necessary to prosperity. Won't you please tell us where we are to get the wherewithall to pay wages? If the thing produced won't pay cost of production, production must stop, and agricultural products have not been paying cost of production. If we pay higher wages, is there any reason to believe that the consuming public will pay more for the product? The consumer now thinks he is paying excessively high prices and if called on to pay more he quits consuming, as in the buyers' strike. If present prices don't leave a fair wage for the producer after paying the labor wage of production, how can we pay more wages? Railroad charges for transportation are so high that our products must be bought by the consumer at a high price or we are forced to quit producing. Our toma-

atoes and melons, cabbages and some other products were costing the consumer enough last season, but when freight and other handlers' charges were taken out, there was nothing left for the producer, and after taking some losses, we let the balance of our crops rot in the field. By paying more wages, would we have gotten better returns?

The railroads must have high rates or they cannot pay the railroad labor wages. Probably, on your theory, this labor is not getting enough. I know, when our products must rot in the field, after we have paid cost of production—we have spent our money in labor, wages and fertilizer, whether we ship or not—but the high rates that the railroads *must have* to pay high wages, for short hours and overtime, prohibits our shipping without further loss! We pay a part of the mining cost for the coal that makes steam to move the freight train; the miner wants shorter hours and a "living wage." What must we farmers do? Eat the culls and work from can to can't that higher wages may be paid to the other fellow, and give him short hours and overtime? How will he get pay for our overtime, working early and late, in wind and rain, risking frosts and bad weather of all kinds, worms and bugs and poor germination of seed? Won't you please tell us how? We are from Missouri—but if you will show us, we will "go to it."

S. H. GAITSKILL.

In reply to the various points raised by these farmers we may say that the MANUFACTURERS RECORD is heartily in favor of a proper recognition of the justice of the farmers' demand for lower freight rates and lower money rates and a proper understanding of the fact that without prosperity for our agricultural interests our nation would certainly go down into ruin. We are trying to save the situation by pointing out these facts.

GROWING ANTAGONISM TO FEDERAL TAX ON SECURITIES ISSUED BY THE STATES.

THERE are some evidences of a return to common sense in the House of Representatives. Contrary to the belief that the proposal for a Constitutional Amendment to permit federal taxation of the income from securities issued under the authority of the several states, a very marked antagonism has developed, particularly from the South.

The proposal to toss away the privilege that municipalities, counties and small political units have to finance their immediate public requirements at comparatively low rates of interest never did have any standing among intelligent men who believe in the American system of government—a minimum of centralized government and a maximum, so to say, of local self-government. The effect of the project would have been to render more easy the borrowing of money by the Federal Government. It would have correspondingly paralyzed the money-raising ability of the states and their sub-divisions. It is good public policy in these days not to render it easier for Washington to spend money. It is good policy for the states to attend to more of their own public requirements and get out of the habit of appealing to Congress for funds. We think it can be established by the record that ultimately a county, in the general run, gets back in service less from every dollar paid into the federal till than it does get back from the dollars citizens pay into their own county treasuries. We doubt if the small communities waste any more money in public contracts than the United States wastes.

The question of economy, however, is not so important as is the preservation of independence in the several states. There has been too much centralization already, and it would gradually become complete were Congress able to dictate the terms on which school bonds for Jackson or some other county were to be raised. The idea that the small taxpayer is going to save money by putting a heavy tax on the bonds he is himself responsible for is too absurd for serious contemplation, and it is equally absurd to suppose that with control over all public borrowing in the hands

of Congress, any measure of independence could be retained by smaller political entities.

It may be unfortunate that some rich men escape taxation, in part, by buying municipal bonds, but this condition is not without its benefits. It creates a good market for such bonds, and this in turn will permit the development of the nation progressively at a moderate cost for capital. Moreover, that capital flows quickly back into the industrial stream. There is such a thing as making the water in a river work twice, if the dams are far enough apart.

It is a matter for rejoicing that a very large body of men in the House of Representatives have declined to be fooled by the cry that the farmers demand this proposed Constitutional Amendment because it will help them. There is no convincing evidence that the farmers do demand it. The more the proposal is understood the less support it will have, particularly in those parts of the nation where sturdy individualism and a love of local freedom are still dominant characteristics.

The federal government does not have to rob the states in order to get money. All it has to do is to establish a scientific sales tax. That is a kind of tax no rich man could escape.

THE CURSE OF MARYLAND'S RACE TRACK GAMBLING.

A YOUNG Baltimore business man was lately sent to the penitentiary on account of having robbed his employers and the reason given for his defalcation was that he had been playing the races. Granted that his statement is true and it probably is, the sin of that young man in part rests upon every citizen in the State of Maryland—a state which disgraces itself and becomes particeps criminis in defalcations by its encouragement of race track gambling.

Maryland licenses the race track gambling which had been driven out of nearly every other state in the union because political corruption has enmeshed the entire state in race gambling immorality shocking to every decent citizen.

The State of Maryland places a premium upon defalcation by encouraging race track gambling. It is paid for the privilege and every dollar it receives directly or indirectly is blood money, and every citizen of the state who does not incessantly raise his voice against this rottenness is a sharer in the blood money which is cursing the state.

The power of the race track gamblers is so great that it is commonly reported that log rolling methods are conducted by which the pet hobby of this man or that man in the legislature is favored or opposed according to whether he is willing to sell his soul, his honor and his morality to the race track gambling element, and the honorable men in the legislature are not powerful enough to vote the racing gambling out of the state.

A few weeks ago the daily papers reported that an official of one of our leading bonding companies, a company whose business it is to guarantee the integrity and honesty of employees invited a large number of the general agents of the company to come to Baltimore on a special car for the purpose of spending an afternoon at one of the race tracks of the state. It seems inconceivable that an official of a company whose whole business is staked upon the honesty and honor of the men who are bonded by it should in the least degree countenance an institution whose chief business is to develop the gambling spirit and thus sow the seeds of dishonesty among thousands who are bonded by that and other similar companies, for gambling soon leads to defalcations.

The country wisely banished the Louisiana Lottery by forbidding the use of the mails to that organization, but the Louisiana Lottery in its influence for destroying the integrity and morals of a country was angelic in comparison with the influence for evil of the race track gambling licensed by Maryland through political corruption.

SOME SOUTHERN BANKERS VOICE THEIR VIEWS.

MR. N. L. FLOURNOY, President of the Bank of Millington, Millington, Tenn., in sending to the MANUFACTURERS RECORD a criticism by the Commercial Appeal of Memphis, of those who have denounced the methods of the Federal Reserve management writes as follows:

"We are sending you under separate cover a marked copy of the Commercial-Appeal, the editor of which, C. J. P. Mooney, is one of the directors of the Federal Reserve Bank at St. Louis.

"It is really amusing to note the effort of our Government to help the rural districts in some way, and then in other ways do that which tends to centralize all money and interests that earn money in the cities.

"The 30 per cent of our population that is now rural are all wanting to get to the point where the money goes, namely the cities. Gov. Harding claims that the Federal Reserve Banks saved the people \$177,000,000 in one year through par clearance of checks.

"This and other earnings have gone to build marble palaces in the cities, raise salaries and pay bonuses. Of course 1440 chambers of commerce have approved of this plan; and city banks earning enormous dividends have said amen.

"The farmer and the country bank are not making their share of this boasted prosperity. We doubt very much the wisdom of plastering our farms with these loans that are to be had so freely now; some day there will be an awakening. We know of instances now where the farmer has to go and make a loan to pay these semi-annual payments on these loans. Salaries are going down in the country; dividends lowered and not paid at all in some cases.

"We very much appreciate your fight for a square deal in all matters, and wish that every country bank was a subscriber to your valuable paper."

Bearing on the same subject Mr. D. L. Bingham of the Bank of Indianola, Indianola, Miss., likewise sending a copy of the same editorial from the Commercial-Appeal writes:

"Ye gods and little fishes! I wonder what kind of a capacity he thinks you, and Andrew J. Frame and Chas. B. DeClaiborne and etc., etc., and so on, have.

That is a fair sample of the propaganda we "unsuspecting public" are fed on.

"As for Carter Glass and Tom Heflin I am of the same opinion as Gamaliel was about Peter—"Let 'em alone, if there is any merit to it the public will find it."

"But when a 'Big Daily' impugns a man's honesty and capacity to think because he has his own opinion which happens to differ from theirs! 'Too much is enough.'"

Comment on these two letters seems almost unnecessary but they are indicative of the sentiment existing among people who are not dominated by the power of the Federal Reserve System and who have the courage of their convictions, men like Mr. Frame, Mr. Claiborne and Edward Stokes, former Governor of New Jersey, now president of one of New Jersey's strongest national banks; Senator Owen, of Oklahoma, and thousands of others. In line with the letters quoted is one from Mr. El. A. Vinson, cashier of the American Bank & Trust Company of Cordele, Ga., who writes:

"We have quoted with interest your attitude in the Federal Reserve Bank matters and desire to compliment you on your fight in behalf of the country banks and the business interests of the country. We hope that you will keep up the fight until the abuses of the system are eliminated."

The Pierce Lumber Co., Marked Tree, Ark., send us the same editorial and write:

"We are inclosing herewith a clipping from the Commercial Appeal of December 8th, regarding Chairman of the Federal Reserve Board. We quite agree with you on the standpoint you have taken in this matter and had rather have most anyone as chairman of this board than Mr. Harding, and we hope that you can so impress the Commercial Appeal with the importance of this as to change their opinion.

"It appears to us that no more worthy man could be found than Mr. Crissinger and we would be glad to do anything in our power to assist in his appointment."

An interesting phase of the spirit which is developing among many bankers against the Federal Reserve System

is shown in a half-page advertisement in the Alexandria, La., Daily Town Talk. That advertisement reads as follows:

"Why we are not members of the FEDERAL RESERVE SYSTEM.

"Banks like all other business corporations, are organized primarily to yield profit to the stockholders, whose money makes possible their existence. Membership in the Federal Reserve System deprives a bank of some of its earnings.

"Banks are quasi-public institutions and should give their customers the best possible service in all matters when times are hard as well as when they are easy. Our correspondent banks are vitally interested in our success and in pleasing us because of the valuable accounts and the close relationship we maintain with them. When money is tight and we must borrow to meet our customers' needs, we borrow money from our correspondents at the same rates the Federal Reserve Banks charge and sometimes lower rates. They give us the best possible service in all matters promptly, thus enabling us to render the greatest service to the banking public. The Federal Reserve Banks care not who does the banking business in Alexandria. Their member banks are bound by set rules and regulations. We are not burdened with the red tape, impersonal attitude or delays incident to dealing with a governmental agency. We deal with business executives and banks, not with rules and regulations.

GUARANTY BANK & TRUST COMPANY.

RAPIDES BANK & TRUST COMPANY.

COMMERCIAL BANK & TRUST COMPANY.

"As a national bank we were required by law to be a member of the Federal Reserve System. In order to make more money for our stockholders and serve our customers better we voluntarily gave up our national charter and became a state bank.

GUARANTY BANK & TRUST COMPANY."

A good many other national banks including some of the strongest in the country are surrendering their national charters and operating under state laws. Such are some of the symptoms of the times.

IF WORKERS WERE GIVEN THE FACTS ABOUT BUSINESS MUCH INDUSTRIAL UNREST WOULD BECOME A THING OF THE PAST.

IGNORANCE of the laws of hygiene and health and ignorance of economic laws have cost humanity dearly indeed. Practically all the industrial strife throughout the country today is the result of ignorance. If the people were familiar with the actual facts and conditions pertaining to industrial management and cost of operation, the demagogue and the red agitator would have a hard time to make their misstatements and misinformation accepted without question as the gospel truth.

C. M. Ripley, of the General Electric Company, writing in the American Industries on "The Corporation and the Workers," presents an unusually sane view of the vital factors underlying the discontent of the workers. Mr. Ripley states that no single thing has contributed more toward misunderstanding between employer and worker than the lack of information received by the workers regarding the actual business done, profits, payroll and achievements and conditions of the particular industry in which they are employed. Realizing this fact, the General Electric Company has been endeavoring to interpret its business to its employees and hopes its experience may benefit others.

The plan followed by the company to spread abroad the true facts about its business could be followed to advantage by many other enterprises. Truth is slow to move but if it is reiterated as often as misstatements are, the public will in time become less ignorant of business affairs and will not be so susceptible to the vicious disturbance makers whose existence depends on the other fellow's ignorance. It was explained that in 1920 the General Electric Company had an average of 83,000 employees engaged in over 100 offices and factories in 50 cities. The total payroll for 1920 was \$125,000,000. The distribution of each dollar of the company's

income was graphically illustrated for the years 1918-19-20.

The chart shows that out of each dollar of income, the cost of doing business was 91.3 cents, allowing a profit of 4 cents in dividends to all stockholders numbering 21,461, and 4.7 cents surplus used for enlarging plants, inventories and working capital. The total cost of 91.3 cents out of each dollar of income was divided as follows:

Materials, supplies, etc.....	40.6 cents
Wages and salaries.....	41.7 cents
Taxes.....	5.3 cents
Transportation, telephone and telegraph.....	2.5 cents
Interest on borrowed capital.....	1.2 cents

This does not look as though dividends were more than the pay roll as some agitators would have the misinformed public believe. It is absurd on the face of it but how can it be expected that the workers and the public should know the truth when business generally has withheld it, allowing the disturbing element to shout from the housetops misstatements and distortion.

If business organizations could carry out this idea with their employees, and with the public wherever possible, much of the misinformation and bad feeling which now exists would be corrected. At heart most workers are sound, human, but they are uninformed or misinformed, and misled, and as a result their prejudices have been developed into a spirit of actual antagonism toward their employers and the employing classes. By workers is meant all employees, workers of hand and brain. And strange to say, many office employees have shown a similar lack of information. "The man in the street" is woefully uninformed and misinformed regarding the working of big business, thanks to the never ceasing misleading propaganda of the agitator.

If all workers were given the facts as the General Electric Company is endeavoring to do about its affairs, and if diligent and intelligent efforts were made to enlighten the working classes of the country by employers, in due time much of the present prejudice would be broken down and the professional agitator and the labor dictator would lose a considerable part of their present hold upon the working people through their lack of facts setting forth the actual conditions of the particular industry in which they are engaged.

WHY NOT TELL THE TRUTH?

IT is conceivable that New York newspapers, which cater to patrons who want to buy farm products at a low price whether that price is fair or not, should thunder against the tariff law. But why should any Southern newspapers follow their example? It was argued that the Fordney tariff would kill exports. But the record shows that exports are moving in record quantities. The new tariff was going to kill the price of cotton, but cotton happens to be selling at 25 cents and more the pound. As a poison, the tariff is proving to be one of the most healing medicines the country ever took.

AN ADVERTISER'S VIEW.

MR. H. S. STROUSE, Advertising Manager of the Pawling & Harnischfeger Company, Milwaukee, in a letter to the MANUFACTURERS RECORD writes:

"We feel that there is a big market in the South for our product, and intend to increase our advertising schedule in the MANUFACTURERS RECORD for the year 1923, for we feel that with this one paper we can practically blanket the whole field. Although the MANUFACTURERS RECORD is only one of about fifty magazines which cross my desk every month, it is one of the few which I take the time to read through carefully. The editorial contents are certainly the finest of any paper in the field."

OUR BROTHERS.

Oh City Soul, Oh Village Fair—
Awake, stretch, groan, gape,
Heavy lidded eyes draw open!
See thou the beauty of God's world.
No more build dens and hovels,
The pitiful and starved life no more permit;
God's children these, God's children all;
The "least of these" God's children,
Our brothers, yours and mine.

E. M. RODEBAUGH,
Wheeling, W. Va.

Business Was Good in November.

Further increases in both production and distribution were reported for November by the Department of Commerce. Mill consumption of cotton for November totalled 577,561 bales, the largest for any month since July, 1917. Exports of cotton also increased to 858,337 bales, or over 8 per cent of the entire crop. Further increases occurred in production of pig iron, steel ingots, zinc, coke, locomotives and leather. Building construction continues active, total floor space of contracts awarded in November exceeding October. The transportation situation continued to improve, though railroads are receiving requests for more than 100,000 cars a day which they can not fill. Prices, both wholesale and retail, rose slightly in November. One of the most significant movements has been the increase in the price of farm products and their improvement in relative purchasing power.

Decrease in Cattle Feeding in Georgia.

A decrease of about 19 per cent in the number of cattle being fed for slaughter in Georgia this year as compared with last is shown by the report of the local Agricultural Statistician of the United States Bureau of Agricultural Economics. This decrease though marked in the eastern and north-eastern sections, is general throughout the State. The central area, that has suffered most from the ravages of the boll weevil, shows a smaller decline than any other section, but even there not over 90 per cent as many cattle are being fed this year as last.

Shortage of feed throughout most of the State, together with the high price of feed and financial conditions are the principal reasons given for the decrease. Also many farmers have curtailed their feeding operations because the margin between the price paid at their local country markets for feeders and that paid for the finished cattle was so small that it did not justify feeding. Much of this dissatisfaction is no doubt due to the inefficiency of the present system of marketing livestock in the southeast. Studies now being made by the Bureau of Agricultural Economics on the cost of marketing livestock and the possibility of establishing centralized markets in the southeast should prove helpful in removing this cause for dissatisfaction.

Graphite Crucible Investigation Completed.

The final stage of the graphite crucible investigation, in which the Bureau of Mines has been engaged for some years, has been completed. The object of this investigation was to determine the availability of domestic bond clays and domestic graphites for crucible making. During the war the obtaining of graphite and bond clays, which had been practically all imported, for making crucibles became a most serious problem. The Bureau's investigations have shown that some American graphites and bond clays are, when properly prepared, equal or superior to foreign materials, for crucibles both in brassmaking and in steel melting.

Statement of Federal Reserve Board Announcing a New Policy.

PAPER OF CO-OPERATIVE MARKETING ASSOCIATIONS DECLARED ELIGIBLE FOR PURCHASE OR REDISCOUNT BY FEDERAL RESERVE BANKS.

[The following statement was issued by the Federal Reserve Board. The changes in policy which are given are of such outstanding importance and the contrast with former policies is so marked that we are printing the statement in full. The significance of what this liberalizing of credit to the farmer means to agriculture and to industry forms the subject of an editorial in this issue.—Editor Manufacturers Record.]

Washington, December 20.

The Federal Reserve Board announced today an amendment to its Regulation B which makes eligible for purchase by Federal Reserve banks on the open market bankers' acceptances with maturities up to six months which are drawn by growers or by co-operative marketing associations to finance the orderly marketing of non-perishable, readily marketable, staple agricultural products when secured by warehouse receipts covering such products.

This amendment to the Board's Regulation should be of material assistance to co-operative marketing associations in financing the orderly marketing of such agricultural products, and it is in line with the Board's policy of being as liberal as possible under the terms of existing law and in ruling on the eligibility of the paper of co-operative marketing associations for purchase or rediscount by Federal Reserve banks.

That the Federal Reserve Board is greatly interested in the co-operative marketing movement and has sought every opportunity to assist the organizers and managers of such associations to work out the best means of arranging their financing so that it should not only be sound but should also enable them to obtain the lowest interest rates for necessary credit is indicated by the number of very liberal rulings on this subject which the Board has issued during the past eighteen months.

These rulings, having reference to what is called the eligibility of notes and drafts for rediscount, were made from time to time as questions were submitted from various sections of the country. They involved farm produce differing as widely as fruit from California, wheat from the middle west and tobacco and cotton from the South, but the same principles of sound financing were involved in all, and in each case the co-operative association was a non-stock, non-profit corporation, the members of which consisted exclusively of growers of the particular crop which the association was organized to market. The growers agreed to sell and deliver their entire crops to the association, title passing at the time of delivery, and the association assuming absolute control over the commodities and their re-sale. Generally speaking, the commodities were pooled according to grades and after all of a particular pool had been sold the proceeds were distributed pro rata. It should be understood that the Board's ruling on this subject would not necessarily apply to associations operating on a materially different plan.

Several kinds of borrowings are involved. If the grower desires to do the borrowing himself he can draw a draft on the co-operative association at the time he delivers his crop, the association accepting it. He then discounts the draft at his local bank, which under the Board's ruling may rediscount it at a Federal Reserve bank as agricultural paper with a maturity up to six months. If the association itself wishes to borrow directly from a bank in order to make payments to the growers who are its members, its notes are eligible for rediscount but the Board has held that under existing law such notes are commercial notes the maturity of which must not exceed ninety days, because the proceeds of such notes are used for the commercial purpose of buying the commodities

from the growers. A bill now pending in Congress would make such notes eligible as agricultural paper with maturities up to nine months.

There was considerable discussion over the first mentioned case, where the grower draws his own draft on the association, as to whether the draft should be considered agricultural and have a six months' maturity. The law says the proceeds must be used for an agricultural purpose, and the point was made that the grower in all probability would use the money so obtained in paying debts previously incurred. It was suggested that unless this could be held to be an agricultural purpose, little agricultural, or six months, credit could be obtained in this way. In replying to this suggestion, the Federal Reserve Board ruled that when a farmer or grower delivers his crop to a co-operative marketing association actually engaged in orderly marketing and when he is obliged to borrow money for ordinary general purposes, such as the payment of obligations previously incurred in growing or harvesting the same crop, a draft drawn by him on the marketing association for a part of the market value of the crop may properly be considered as drawn for an agricultural purpose.

This ruling has rightly been regarded as a very liberal one, and will greatly facilitate the operations of co-operative associations—in fact has already done so. It is based upon the principle, long recognized by the Board, that the carrying of agricultural products for such periods as are reasonably necessary in order to accomplish orderly marketing is a legitimate and necessary step incident to normal distribution. The Board pointed out, however, that there is a distinction between carrying products for such periods as are reasonably necessary and mere speculative withholding from the market in the hope of obtaining higher prices. Under the Federal Reserve Act paper drawn to finance speculation is ineligible for rediscount. The Federal Reserve Board also pointed out that in determining whether or not an association is engaged in orderly marketing, rather than speculative holding, it is not improper to take into consideration the fact that each crop must ordinarily support the market until the next crop is harvested.

A further and material aid to co-operative marketing associations is the ruling that bankers' acceptances drawn to finance the domestic storage of commodities pending orderly marketing by such associations are eligible for rediscount. In creating such acceptances the association arranges for a credit with some national or State bank which accepts its drafts to the amount arranged for when covered by warehouse receipts, and after acceptance such drafts are eligible for rediscount or for purchase in open market by Federal Reserve Banks. Under existing law, they are eligible for rediscount only when they have not more than three months to run. Heretofore, they have been eligible for purchase by Federal Reserve banks only when their maturities at the time of purchase did not exceed three months; but the new amendment to the Board's regulation permits them to be purchased with maturities up to six months. Bankers' acceptances are recognized as the most desirable form of credit, as they sell

on the credit of the accepting bank as well as on their backing of staple collateral and they usually take the lowest rate of interest, if properly drawn and safeguarded.

One of the most recent, and also one of the most liberal, rulings of the Board on this subject was to the effect that where a member of a co-operative association delivers his crop to the association and at substantially the same time draws a draft on the association which is accepted by it and discounted by the drawer at his own bank, such a draft is a "bill of exchange drawn in good faith against actually existing values" and, therefore, is not subject to the 10 per cent limitation prescribed in the Federal Reserve Act on the aggregate amount of paper of any one borrower which a Federal Reserve Bank may rediscount for any one member bank. This should be very beneficial to the farmers and their associations because it permits the rediscount of such paper in unlimited amounts.

The above are not all of the rulings made by the Federal Reserve Board on this subject, and, of course, there are other classes of eligible paper that can be used in borrowing by co-operative marketing associations, but they are probably the most important rulings. It should be understood also that the above statements are not intended as precise technical statements. All of the Board's various rulings on this subject except the one last mentioned were brought together and summarized in the Federal Reserve Bulletin for September, 1922 (page 1044 of the large edition and page 269 of the first edition) to which reference should be made by managers of associations, bankers and others interested in exact statements and in the legal points involved.

Some Curiosities of Our International Trade.

In reviewing some phases of our foreign trade a circular letter of the National City Bank of New York says:

Announcement that a big consignment of butter from the other side of the globe is now crossing the Pacific from New Zealand to New York, calls attention to the increasing detail in which the common products of the various sections of the world are now being interchanged. While we have been congratulating the American cow upon the fact that she has since the beginning of the war supplied a half billion dollars worth of her products for the foreign trade, we now find that the cows of other parts of the globe are quietly invading our own markets by unaccustomed routes and that they have sent us 120 million dollars worth of their products while we were sending 500 million dollars worth of our own dairy products to other markets, especially those of Europe. We sent 150 million dollars worth of butter, cheese, condensed milk and other dairy products out of the country in 1919, and in the following year, 1920, Australia, New Zealand, Argentina, Brazil, Colombia, Mexico, Canada and certain European countries sent us 30 million dollars worth of the products of their dairy industries. And the reports of big shipments now on the way from the dairy farms of New Zealand indicate that the great dairy industry of that country does not find even the equator and the long trip across the Pacific a bar to a permanent movement of their products to our markets, despite the fact that the output of our butter, cheese and condensed milk factories aggregated over a billion dollars value in the last census year, 1919, while the details of that census shows that we produced in 1919 6,894,000,000 gallons of milk, 1,628,000,000 pounds of butter and 450,000,000 pounds of cheese. A little more than one-half of the butter produced in the United States is the product of the factories and the remainder from the farms, while of the cheese products of the country about nine-tenths are of factory production.

Eggs are another class of farm products which are being sent from the other side of the globe to this greatest agricultural country of the world. Our importation of eggs in the single year 1921 was over 3 million dozen in the natural state, most of them coming from China, Japan and Australia, while frozen or dried eggs entering the country were also chiefly from China, and have averaged about 5 million dollars a year value, despite the fact that the number of eggs supplied by the American hen now averages about 20 billion a year.

Peanuts are another example of the free interchange of

articles considered of minor importance. The United States produces from 35,000,000 to 50,000,000 bushels a year, yet our importation of peanuts in the past decade has amounted to 27 million dollars value, and of peanut oil 54 million dollars, while our exports of peanuts in the same period were nearly 10 million dollars though of peanut oil the quantity exported was comparatively small.

Bristles are still another curiosity of international trade. We are the world's greatest producer of swine and send millions of them to slaughter every year, yet the quality of the bristles of the "razor back" swine of the Orient differs so much from that of the refined American hog that our importation of bristles, chiefly for use in the manufacture of brushes, now ranges from 5 to 10 million dollars every year and has in the past decade totaled nearly 50 million dollars, a very large proportion coming to us from China.

In many other articles we are constantly bringing into the country considerable quantities of merchandise of which we are already the world's largest producer. Our underground coal supply equals that of all the balance of the world yet the northern border of the United States imports considerable quantities of coal from Canada; we are the world's largest producer of copper yet we import quantities of copper especially from South America, Mexico, and even the Orient largely because of our better smelting and refining facilities; we are the world's largest producer of petroleum yet we are bringing large quantities constantly from Mexico; we hold high rank as a lumber and timber producing country yet we are constantly importing lumber in quantities from our next-door neighbor, Canada, and wood pulp from Canada and the Scandinavian countries. Nearly all of these articles which we are adding to our own domestic supply of food or manufacturing material comes from non-manufacturing countries and are thus paid for in large degree by the products of our factories.

7-Story Apartment to Cost Over \$1,250,000.

Birmingham, Ala.—The Altamont Investment Co. is erecting an apartment building of seven stories with basement to contain 100 apartments of one, two, four, five and six rooms each, and involving the expenditure of more than \$1,250,000. The ground floor will provide for six stores. Sixty apartments will be completely furnished and this section will be operated as an apartment hotel with complete service. The remaining apartments will be unfurnished but equipped with all modern conveniences including electric refrigeration for each. Boilers for heating will be equipped with automatic oil burners. Two high speed elevators will be installed. There will be a ballroom, roof garden and promenade on the top floor.

The exterior of the structure will be of red brick, with cream terra cotta trim. The building will be fireproof throughout. J. E. Sallis is the architect and F. R. Payne is general contractor.

Business Good With Furniture Industry But Shipping Facilities Inadequate.

High Point, N. C.—The furniture industry now has plenty of business but is handicapped by the lack of shipping facilities and the shortage of mirrors, according to a report just made by J. T. Ryan, secretary of the Southern Furniture Manufacturers Association. The tendency of thought among manufacturers is that there should be no general increase in prices, except as made necessary by the increased cost of mirrors, leather goods and other items which have advanced materially since spring, stated Mr. Ryan. Conditions in the retail trade are reported satisfactory. In addition to substantial increases in the volume of business during the past two months, collections have been about normal, contrasted with collections averaging 60 per cent normal two years ago.

To Erect Branch Shoe Factory.

Union City, Tenn.—The Brown Shoe Company, St. Louis, Mo., has acquired a site here for a branch factory, and work will begin immediately upon the construction of the plant. Pending completion of the new structure the company has located in the Bransford Building where it will begin operation shortly.

Expanding Hydro-Electric Developments in the Ozarks

NEW DAM BY DOHERTY INTERESTS AND THREE DAMS BY LOCAL COMPANY PROMISE IMPORTANT INDUSTRIAL DEVELOPMENT IN SOUTHWEST MISSOURI AND UPPER ARKANSAS.

By TOM SHIRAS.

Cotter, Ark.

With the water power development now promised for the White River country of the Arkansas and Missouri Ozarks, that section seems destined to become one of the country's important "white coal" fields during the next few years. The immense dam constructed in the White River, in Taney County, Missouri, by the H. L. Doherty interests, has been furnishing Southwest Missouri with a large part of its power for the last decade. The same interests that control this property have applied to the Federal Power Commission for a permit to construct another hydro-electric development on the White River, three miles above Hollister, about 6½ miles above the St. Louis, Iron Mountain & Southern Railway bridge at Branson, Mo. This will develop all the power in the upper White and the James.

The proposed structure will consist of a monolithic reinforced arched dam, approximately 1450 feet long on the crest, and 175 feet high, with a concrete, steel and brick power house, having an installed capacity of approximately 40,000 K. W. The power to be developed with this project will be transmitted into the Joplin zinc mining district, and will also be wholesaled to public utilities operating in Southwestern Missouri, Southeastern Kansas and Northeastern Oklahoma.

Also, the Dixie Power Company, an Arkansas corporation, is preparing to construct three dams, one in the White, one in the North Fork and one in the Buffalo River, which will develop all the power in the middle sector of this stream. These projects will develop approximately 300,000 horsepower.

The Dixie Power Company has had engineers in the field since 1919, making surveys and testing the dam sites with a core drill. They have completed all their engineering work with the exception of that on the Northfork, which will be finished in a very short time.

The construction of this dam will create an artificial lake which will reach from this place to Forsyth, Mo., a distance of 120 miles. It will be several miles wide in the widest place. This lake will give water transportation to sections which are now remote from railroads, and will

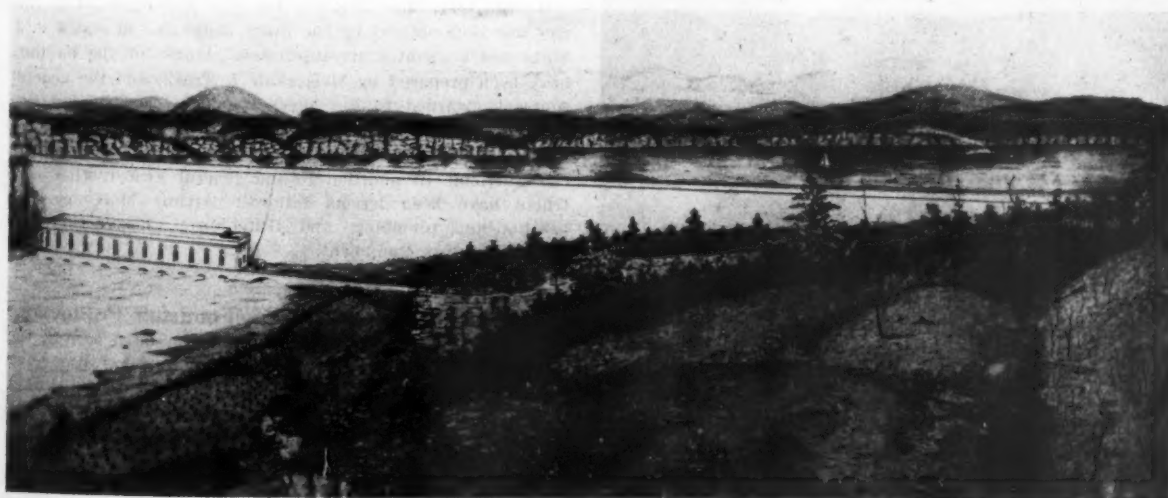
so control the flood waters, it is calculated, that the lower Arkansas River counties in Arkansas will never be subjected to disastrous floods again. The flood waters will be caught in this immense reservoir during wet periods, and



MAKING FOUNDATION TESTS WITH CORE DRILL IN MIDDLE OF WHITE RIVER.

released during dry periods, which will maintain an average flow of the river below the dam, making it navigable to Cotter for small boats.

White River affords an adequate flow of water above



PROPOSED DAM OF DIXIE POWER CO., AT COTTER, ARK.

Cotter to create a head sufficiently large for the maintenance of a given amount of power with a minimum fluctuation. The watershed above has an area of 6200 square miles, with an average rainfall of 46 inches over a 40-year period. According to the survey made of the basin last winter 52,000 acres will be inundated. Ten per cent of this will be bottom land now in cultivation; the remainder bluffs and rough mountain sides.

This artificial lake, with Lake Taneycomo, and the one which will be created by the new Taney county project will make a chain of lakes nearly 300 miles long. The development should give this section nation-wide prominence as a vacation ground.

Bordering on White River are palisades which in the opinion of the writer are more beautiful than those which tower above the Hudson, and back from the river, tier upon tier, are banked the beautiful Ozarks, wonderful in their scenic grandeur. Everything is found there that offers a lure to those who love the great outdoors. Springs burst from the sides of a thousand mountains and flow off through cool, wooded valleys, or rock bound canyons. Countless caves are still unexplored. Here and there one chances on a natural bridge of rock, and in certain places the water of centuries has cut and carved the limestone and sandstone



LOOKING UP WHITE RIVER AT DAM SITE NEAR COTTER.

formations into grotesque shapes that rival the old beauty of the Garden of the Gods. Over and through it all wild life runs riot.

Citizens of the White River valley expect a notable industrial development when these hydro-electric projects are completed. The valley has immense resources in zinc, lead, iron, manganese, glass sand, marble and timber. It also produces some 50,000 bales of cotton ever year. All of these products are being shipped now as raw materials. With

cheap power it is expected that they will be manufactured here into finished articles.

The real value of the potential water power in the White River and its tributaries in Arkansas was not fully determined until 1909, when the United States Geological Survey



SMALL TURBINE POWER IN OZARKS.

This shows sluice, upright shaft and pulley from which a belt is run to the grist mill seen at rear. One of the ways the natives of the Ozarks developed power in the smaller streams.

in conjunction with the State of Arkansas made a survey of these streams under the direction of Prof. W. N. Gladson, head of the engineering department of the University of Arkansas.

The report of this survey, which was issued in 1910 showed an undeveloped "white coal" field that contained remarkable possibilities. It showed that some 500,000 horsepower was going to waste.

Years ago, however, the sagacious native of the Ozarks attempted to utilize at least a portion of this wasted power by taking advantage of that which smaller streams offered. turbines, he developed the power needed to operate his mills and his cotton gins. He has been using it for a century, and continues to use it, notwithstanding the gas and oil engines that have been developed because water power is very satisfactory and it is cheap.

10-Story Hotel to Be Erected at Kansas City.

Kansas City, Mo.—The erection of a 10-story hotel in this city has been started by the Stats Hotel Co., in which S. J. Stats and associates are interested. Plans for the building have been prepared by McKecknie & Trask, and the general contract awarded to the Mosby-Goodrich Construction Co., both of Kansas City.

The hotel will be 50 by 142 feet and of reinforced concrete construction. In addition to the general award other contracts have been let as follows: Arthur McKinley Co., heating and plumbing, and Hutchinson Construction Co., electric lighting equipment.

Cash Curb Market Stimulates Foodstuff Production.

Helena, Ark.—A curb market is being operated here by the Curb Market Association, composed of farmers producing foodstuffs on their own farms, and the Civitan Club Market Committee. As a result the growing of foodstuffs on farms in the section has been greatly stimulated, because those who use the curb market are assured of cash sales for what they produce. Plans are already being discussed for the erection of a permanent market building.

Monopoly vs. Democracy in Banking*.

BRANCH BANKING MENACES THE WELFARE OF THE COUNTRY.

By ANDREW J. FRAME, Chairman Waukesha National Bank, Waukesha, Wis.

As I do not wear ermine, I leave the law to take its own course. I speak only to upbuild the nation at large.

To our mind the paramount question before the American people today seems to be, Does the doom of the 30,000 independent banks of the United States impend? The proofs seem conclusive that these banks have done more to upbuild this powerful nation than all the cream-skimming monopolistic banks have done for other nations. If so, this nation's greatest progress is at stake.

Let us brief the case from an earnest study of the "History of Banking in all Nations," as well as other reliable authorities; from a practical banking experience in the United States for more than sixty years, wherein I have seen wildcat currency and wildcat banking expunged from all the states tolerating these excrescences. In fact, in Wisconsin as one of the chief sinners, I was chairman of a banking committee that drew the statute which, thanks to our splendid bank commissioner's administration of the law, has resulted in but three small failures in nineteen years wherein a depositor has lost a dollar of his capital! I have also seen old world banking recede from some independent banking freedom, to monopolistic banking, colossal failures and appalling losses to depositors, which should be object lessons to warn our statesmen to pause before handing over our destinies to the tender mercies of any autocratic banking power. May we ask: Has not autocracy and oppression wrecked the equilibrium of the whole world? We might concede some small advantages may accrue to a favored few under branch banking, but in the language of the immortal Lincoln, "the greatest good to the greatest number," would be practically eliminated. There are some natural monopolies. Surely branch banking is not one of them.

Since 1916, when the American Bankers' Association, after a full discussion, with but two dissenting voices, condemned "branch banking in any form," which resolution has never been reversed by the Association, the propagandists in the press have flooded the nation with such sophistical preachments as these:

- 1st That branch banking serves the people better.
- 2d That under branch banking, failures and losses to depositors are lessened.
- 3d That, because a few of our states have granted to state banks largely in cities the special privilege to have branches, therefore, the national banks should have some of the pork.

In answer to Nos. 1 and 2, let us quote from the world's history some astounding facts.

Without going back to the destructive panics in Great Britain under its branch banking system from 1836 to 1839, 1847 and 1857, where according to Henry Dunning MacLeod, "private banks stopped discounting altogether. When universal ruin was at last impending," etc., permit me to quote by way of comparison in later years: In 1866, when Overend Gurney & Company failed for £10,000,000 the bank failures in Great Britain aggregated the stupendous sum of £50,000,000.

In 1878 three banks in Scotland with some 200 branches failed for £20,000,000, with a deficit in assets about equal to the total losses to all the depositors of all the national banks of the United States since 1863. Our banking power averaged 100 times these three banks.

In 1890 the Barings failed for £21,000,000, but was liquidated by the London banks for fear of a general upheaval.

Thus in 1866, 1878 and 1890 liabilities totalled £91,000,000.

According to the report of the comptroller of the currency in 1901, the total liabilities,

1863 to 1901 of failed national banks was.....	£37,000,000
1863 to 1898 of all other banks in the United States	44,000,000

Total £81,000,000

This is \$50,000,000 short of British failures in the panics of 1866-1878 and 1890 alone, not counting intermediate failures for forty years.

London's last bank failure with branches occurred in December, 1920, with estimated losses of \$14,000,000.

The American Encyclopedia for 1893 says of Australia: "Out of twenty-eight banks with 1700 branches, thirteen of them, with 800 or 900 branches, failed in six months for £90,000,000." A moratorium of five years was given in which to recover. Her banking power approximated one-sixth of ours. Are failures and losses less than under our system?

Again, Sir Edward H. Holden, in 1919, then Chairman of the Board of Directors of the Amalgamated London Joint City and Midland Bank, which had 1300 (now 1600) branches and \$1,600,000,000 deposits (now \$1,800,000,000) pleaded:

1. "These banking amalgamations have prevented panics and have put credit under trade and the Empire.
2. "Large and powerful banks are indispensable to raise £300,000,000 sterling to restore the industries after the war," etc.

Permit me to say, the net profits in 1918 were 54 per cent on the capital or say 27 per cent on capital and surplus, therefore is branch banking philanthropic or what? The average profits of all national banks since 1863 approximated 8 or 9 per cent per annum. The 1600 branches submit for head office conclusions, all loans over \$500 before action thereon.

Some thirty years ago over 86 per cent of Great Britain's banking power was subject to say eighty central banks, which now through amalgamation, are reduced to five.

Less than ten great banks practically dominate the whole banking power of France and Germany. Are these not object lessons for our avoidance?

In Canada some seventeen central banks (reduced more than one-half through amalgamations and failures in less than thirty years) now skim the cream from over 4000 branches, leaving only the skim milk for the rural and suburban populations. Branches have no local stockholders, no presidents, or cashiers. They loan no money to farmers on mortgages. They practically pay no taxes and have figureheads for managers, subject to alien officers' orders. The most serious objection is practically *no profits are distributed locally where they are made, thus impoverishing the nations at large for the sole benefit of monopolizers in the great centers.*

Official statistics clearly show that failures of banks and losses to depositors in Canada, compared with our national banking system, exceed ours several times over. These facts are confirmed by at least one ex-manager of a big central bank in Canada, in testimony before the United States Senate Committee as shown in the monetary commission reports. He says losses are five to one in our favor. Canada has 3,000,000 square miles of territory. Her banking power is less than little Massachusetts alone. She is asleep compared to our progress.

As to monopolization putting "credit under trade and the Empire," I respectfully quote briefly from a long article some years ago in the Toronto Star:

"Monster banking monopoly, a leech at Canada's throat,

*Address of Mr. Frame at the American Bankers Association, New York.

killing local industry, depopulating rural districts. Centralization of almost entire financial power in the hands of a few capitalists has resulted from our much vaunted banking system. Almost total extermination of local banks. Planting of a branch to suck on local earnings," etc.

"To this accursed system of concentration of credit, the Dominion of Canada stands indebted for a contracted population of 7,000,000 in place of 25,000,000 rightfully due it under decentralized systems of banks, designed to sustain, to breathe the breath of economic life throughout the remotest as well as the most insulated of its parts," etc.

May I add: In a letter to me from the chairman of a Canadian royal committee appointed to investigate branch banking, he says, "*The great objection to the Canadian banking system is that it concentrates the banking profits and influence in two large cities, Montreal and Toronto. This also applies to all business; manufacturing, trading, insurance and mortgage loans.*" His address before the Iowa state convention last June is very illuminating.

This indictment seems to be confirmed by Walter L. Baker of Toronto, Canada, who has long been in practical banking in Canada and who lately published a book entitled "Money Monopoly vs the Community Dollar." I commend its reading to anyone desiring light.

As space forbids, we forbear further quotations, except to say that as the independent banking system of the United States has sustained her wonderful development; has floated in the briefest time the most colossal loan campaign ever known; has upheld the credit of the great nations of Europe in the world struggle to the extent of eleven billions of dollars, to which we can add five billions on private account; our pre-war debts of say five billions are also paid and today we are a creditor nation for some sixteen billions of dollars, therefore may we not fairly assume that it is not necessary to monopolize, to "prevent panics and failures and put credit under trade and the Empire?"

Evidently, an occasional twig cut from an independent system but strengthens that system, whereas under branch banking, when the tree and all its branches fall, then a great public calamity follows.

I here leave to an intelligent public to draw its own conclusions as to whether or no branch banking is better and failures and losses are less than ours.

Let us now take up Question No. 3, should special legislation be permitted to favor a few monopolists which would but drive the wedge in further and later Canadianize our whole banking system?

We answer most emphatically, No!

The United States Comptroller of the Currency is quoted as saying, "*If it had been my duty to make laws of the various states of the Union, I should not have permitted branch banking.*"

Again while most state laws absolutely prohibit branch banking and a few permit it in cities only, two or three states have opened the door wide.

Is it a menace or not?

California has 280 branches out of 900 in the state. The Bank of Italy has some sixty in various sections of the state and the end seems not yet. The First National Bank of Los Angeles has absorbed some 25 branches and the independent banks throughout California are in a state of panic over coercive measures that seem to say, "sell out to us or we will drive you out of existence."

In Michigan, the law prohibits branch banking except in cities. In Detroit, there are 168 branches of ten state banks. The president of the First National Bank there pleads that because state banks have this special privilege, therefore, national banks should also. He says "As a matter of fact, branch banks are nothing more in effect than 'branch offices, to receive deposits'—for the branch as a rule makes no

loans. The branch manager has authority to loan up to \$500 or \$1000, but applications above this limit go before the head office," largely miles away. A beautiful and enticing picture for the suburban resident who has spent his life in upbuilding his section through community banking trade, manufacturing, etc. In short, give up power to skim the cream from the suburbs and leave the skim milk for those who produce it.

In Missouri branch banking is not permitted under her laws. The suburban banks of St. Louis became alarmed because the First National Bank there took steps to open "offices" in South St. Louis, miles away, in competition with the several strong banks there which had borne the heat and burden of decades in developing local industries, etc.

At the Wisconsin State Bankers' Convention, 1922, the following appeal was broadcasted: "Are you awake and ready to combat the new 'branch bank' menace which is threatening to 'wipe out' the independent city and country banks of America?" The reply from a full house was this unanimously thundered approval:

"Resolved, By the Wisconsin Bankers' Association in 1922 convention assembled that we are unalterably opposed to branch banking in any form in the state or nation, and that we deplore their recent growth in some other states, and be it further

"Resolved, That we will regard the establishment of branch banks in this state as an act unfriendly to the banks of Wisconsin."

As to Ohio and Michigan, Comptroller Crissinger says, to illustrate: "In my own state of Ohio we have a bank in Cleveland, operating under a state charter, with forty-six branches in that city, and is now extending its operations throughout the state and has absorbed practically put out of business—all the big national banks in Cleveland. Take the city of Detroit, with only three national banks (all rather husky) the rest having been put out of business by 185 state banks and branches."

Parallel conditions might be multiplied in Illinois, Minnesota, Connecticut and other states.

With such conditions before us will this nation awake to its peril or sleep at the switch?

Query: If a few big state banks, having branches, can "put out of business" all other competitors and the big national banks are endowed with like powers, how long will it take to put all the independent state and national banks out of business?

Have the smaller banks of this nation no rights which the monopolist is bound to respect?

If it is a slow poison that is eating out the life of the independent banks in a few states, is that a sound reason for grafting the cancer upon the great national banking system?

The honeyed transparent suggestions that are being freely used to convince Congress to permit branches of national banks in cities, for like reasons as are now given, if granted would surely open wide the door to Canadianize both our banking systems. "This nation cannot live half slave and half free."

The national bank act apparently prohibits branch banking, yet for sixty years, though bills to amend the law permitting it have repeatedly been presented in Congress, according to the chairman of the House of Representatives banking committee, "*It has not been possible, up to the present time to get a bill in any form whatsoever through Congress that would authorize national banks to have branches.*"

In view of these facts, is it not amazing that any Comptroller of the Currency should approve of branches? Is it not

amazing that any banker should defy this record and proceed to drive the wedge further toward monopolizing our independent banking systems? Because a few states permit the cancerous growth to eat out the vitals of some localities, is that a sound reason for grafting the cancer upon the nation at large?

Do these banks, claiming the congressionally denied right, need to absorb other banks to keep them from starvation? We all glory in our great central banks' success when they stand on their own legs, in fair competition with the independent banks of the nation. Is supreme selfishness to override justice toward all?

Permit me to quote from a few eminent authorities to sustain my main contentions:

The American Banker, New York, says: "We believe with Mr. Crissinger that the best thing is not to have branch banking in any form, and we also believe that the preservation of our independent banking system is *more important* even than the *preservation of our national banking system*. Let us hope that the Comptroller instead of encouraging national banks to go into branch banking from a defensive viewpoint will *cooperate in legislation to stop the extension of branch banking in the states.*"

The Commercial and Financial Chronicle, New York: "We would have our individual free and independent nationals preserved from this encroachment just as we would have our state banks preserved. We are far from believing in a vast, sinister 'money power.'"

"With permitted small capitalization under supervision, we think our community wealth and prowess is such that a bank will spring up for intimate service, sustained by popular regard, in every spot in this country which needs or ought to have a bank."

Barron's Weekly, Boston: Mr. Barron is also president of the Wall Street Journal: "The question is a highly interesting one, and most of us will share Andrew J. Frame's well-grounded distrust of a merger of twenty-five banks in Southern California, all under the protecting wing of the First National Bank of Los Angeles. For the needs of the American people this merger looks uncommonly like a step in the wrong direction."

THE MANUFACTURERS RECORD, Baltimore: "There is a new snake crawling in the financial domain and the time to scotch it and paralyze it is now. In branch banking by national banks is the seed of arrogance, the promise of tyranny, the insolence of lawlessness, a conspiracy for centralization and the yoking of the less developed communities to the juggernauts of metropolitan financiers."

The editor pleads for "that intimate personal knowledge under independent banking which is so essential to our greatest progress."

Time forbids further quotations except to say, the true remedy lies in cutting out the cancer from state and nation. Special legislation in favor of the rich as against the progressive many is clearly un-American and directly antagonistic to the spirit of constitutional liberty. Let us not dry up the streams of progress through a mistaken "grab all, lose all" error.

It seems impossible that our statesmen can be seduced into political as well as economic suicide through endorsing such destructive fallacies.

In this land where great prosperity abounds may we not well exclaim, "Thank God we live under the Stars and Stripes?" Our only dark clouds emanate from the preacher of the gospel of discontent. The object lessons of monopoly, arrogance and oppression of the past decade in the Old World should warn us that American freedom should not be superseded by any oligarchy. **Branch banking is a calamity to any city, state or nation.**

\$750,000 SHRINE TEMPLE FOR MEMPHIS.



To be erected for Al Chymia Temple, Nobles of Mystic Shrine: cost \$750,000; 50 by 150 feet; 10 stories and glassed-in-roof garden; brick construction; concrete floors and foundation; 7 stories for offices, upper floors for use of Temple; Jones & Furbringer, and Harker and Cairns, Associated Architects; Kaucher, Hodges & Co., general contractors, all of Memphis.

Farmers Turn to Commercial Peach Orchards to Escape Clutches of Boll Weevil.

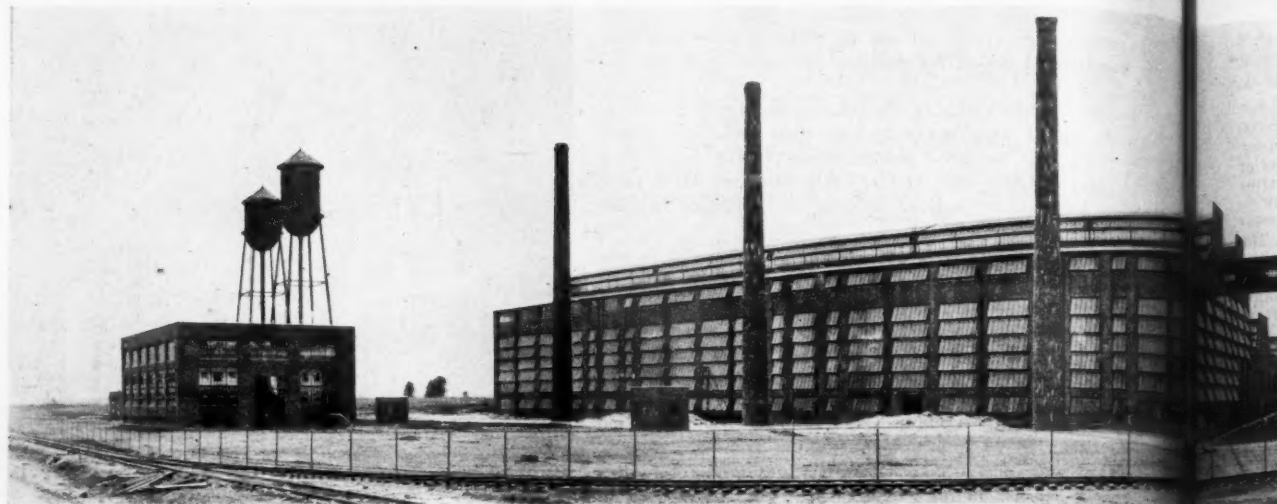
Spartanburg, S. C.—Spartanburg County farmers are planting 50,000 peach trees this month and when this work is completed there will be 75,000 trees in commercial orchards. Prior to 1920 there were no commercial orchards in the county, and their establishment has been largely due to the ravages of the boll weevil and the necessity of diversification. The first crop of peaches will be gathered about three years after setting the trees although the first heavy crop will not come until the fourth or fifth year. Several carloads of peaches were shipped from this section last year, being the product of the first orchards established.

The Gramling Peach Growers Association of which G. M. Gramling is president is promoting the growing of peaches on a large scale, and 150 acres have already been planted at Gramling and before the end of the year this acreage will be doubled. C. K. Callahan of this city who owns a farm at Moore is planting 2000 trees. L. E. Godman will place 2500 trees on his farm. Wallace Whitlock is planting 2000 trees. Dr. D. O. Leonard has planted nearly 5000 and J. J. Cudd has placed 100 acres in peaches.

Construction Begun on Extension to Brunswick Levee.

Vicksburg Miss.—Work has begun on the Brunswick Levee Extension, which when completed will reclaim about 300,000 acres of rich delta land. Major Howell, United States Engineer for the Vicksburg District will supervise the work and the appropriation now available will make possible the building of two miles of levees. The Board of Trade here has been especially active in fostering the levee development.

RECENTLY COMPLETED PLANT OF UNITED STATES



ONE OF THE MOST COMPLETE AND UP-TO-DATE GLASS PLANTS EVER BUILT. IT COVERS 20 ACRES OF GROUND BEING OF CONCRETE, BRICK AND STEEL. WHEN IN FULL OPERATION ABOUT

The Fight Against The Boll Weevil and Its Relation to Cotton Prices and the Supply of Calcium Arsenate.

Editor Manufacturers Record:

Atlanta, Ga.

I note your letter of the 8th instant concerning the use of calcium arsenate in the South. This is a large subject to treat in a letter.

So far as my information goes, there is no such amount of white arsenic available from which to manufacture sufficient calcium arsenate to poison six million acres of cotton. At four applications of five pounds each, which is recommended by Government authorities, it would require 120,000,000 pounds of calcium arsenate. To manufacture this quantity, roughly speaking, it would require 24,000 tons of white arsenic. The total production of white arsenic in this country, is around 12,000 tons and the imports around 5000 tons. This total of 17,000 tons of white arsenic has to supply all lines of manufacturers using this commodity,—paints, insecticides (of which there is a varied assortment running into quite a large tonnage, which business was established before the boll weevil was ever "personally" known in this country) glass, various chemical combinations, etc. There is possibly a supply of white arsenic to be used in the manufacture of calcium arsenate amounting in round numbers to 4000 tons, from which could be manufactured approximately 10,000 tons of calcium arsenate.

This quantity of calcium arsenate, making five applications of five pounds each or a total of 25 pounds to the acre would poison just 800,000 acres.

There is no possible way to increase the supply of white arsenic materially for the coming cotton crop. It appears that all has been done that could be done both in our domestic stocks as well as imports; the present comparatively high price for white arsenic has induced everyone at interest to put forth their best efforts.

In the future the supply of white arsenic can be very largely increased if the market price is high enough to permit the necessary cost of extracting the arsenic from ores that have no other value than the arsenic content. This is a plentiful source of white arsenic for nearly every state has a supply of arsenical ores, but—it is not at present and possibly never will be a cheap source. Looking the matter

squarely in the face, and speaking as one on the outside (for I am not a chemist), the proposition presents two phases:

1st. Unless we can find some other efficient and cheaper method of destroying the weevil, whether by another poison or some mechanical means, then,

2nd. We have got to recognize the fact that the manufacture of white arsenic has its peculiar difficulties and under the present known methods of extraction is expensive and the farmer has got to pay the cost and pass it on. In other words and as a finality, it is a bill not for the farmer to pay but for the consumers of the cotton crop to pay. The law of supply and demand will take care of this proposition if the farmer will only permit this law to operate by the orderly marketing of his crop. If he dumps his crop on the market in the future as he has in the past and thus sets the vital law of defiance, then he will not get the cost of the calcium arsenate, or the cost of his fertilizers, or indeed, the cost of his plowing and cultivating, out of his cotton crop. This is simply one more big and vital reason why the farmers should join en masse the Cotton Growers Co-Operative Association.

An investigation on the part of Congress or the Department of Justice, or the Federal Trade Commission will only result in one certain thing—the spending of tax money that could better be employed otherwise.

Right now the selling price of calcium arsenate is around 18c per pound. Before the end of the season the large demand may send the price yet higher. Some authorities claim that five to six applications of five pounds each are necessary to insure the safety of the crop. At 30 pounds of calcium arsenate to the acre and with cotton at 25c per pound for lint, it will require 21.6 pounds of lint cotton to insure the safety of each acre.

The cost of applying calcium arsenate is very little. Generally no extra labor is hired; labor is paid for by the month and not by the day or hour and the interest on the investment and wear and tear on the machine for distributing is very small on the acre basis. One dollar per acre added to the cost of calcium arsenate would be ample to cover all cost.

The important fact to keep in mind is that the farmer cannot afford to employ slack methods in growing cotton under boll weevil conditions. It costs him just as much to poison

SHEET AND WINDOW GLASS CO. AT SHREVEPORT, LA.



AND EMBODIES IN ITS CONSTRUCTION THE BEST MODERN IDEAS FOR THIS TYPE OF FACTORY, THE BUILDINGS 500 MEN ARE EMPLOYED. ANOTHER UNIT IS TO BE ERECTED LATER.

an acre whether the yield will be 150 pounds of seed cotton or 1500 pounds of seed cotton.

At 18c per pound for calcium arsenate, using 30 pounds to the acre and adding \$1 for labor we have a total cost of \$6.40 per acre. We get the following increased expense per pound of seed cotton due to the enforced use of calcium arsenate:

Yield of 300 pounds seed cotton cost.....	02.13 cents per pound
Yield of 600 pounds seed cotton cost.....	01.06 cents per pound
Yield of 800 pounds seed cotton cost.....	00.80 cents per pound
Yield of 1000 pounds seed cotton cost.....	00.64 cents per pound
Yield of 1500 pounds seed cotton cost.....	00.43 cents per pound

Or, look at it another way. With lint cotton at 25c per pound and cotton seed at \$25.00 per ton, seed cotton is worth 9 1/6c. per pound. Figuring this price on the varying yields, the per cent of the crop required to pay for the calcium arsenate is as follows:

300 pound yield of seed cotton.....	23.26 per cent
800 pound yield of seed cotton.....	8.71 per cent
1500 pound yield of seed cotton.....	4.65 per cent

Now, if the farmer carries on intelligently, he will do three things and by so doing, place himself where the boll weevil will not hurt him nor will the price he pays for the calcium arsenate hurt him:

1st. Grow a crop worth saving. By using the best methods of seed selection, planting and cultivation; fertilize intensively and carefully.

2nd. Save the crop. By the intelligent use of calcium arsenate, applying it according to directions and if local conditions require a change or modification of these directions go at it carefully and if possible get help from the Department of Agriculture who are always anxious to render such assistance.

3rd. Sell the crop at a profit. By getting together in a co-operative selling way, the farmers by the orderly marketing of the cotton crop, will find no difficulty in passing this expense along to the consumers of his crop. The world will pay this expense if the farmers get together and make it do it; otherwise the battle between the farmer and the boll weevil is decided right now in favor of the boll weevil.

D. B. OSBORNE.

Plans to Erect 100 Residences During Year.

Monroe, La.—For the purpose of carrying out an extensive home building campaign in this city during the coming year, the Arent Investment Corp. has increased its capitalization from \$50,000 to \$150,000. The plan is to erect 100 dwellings, none of which will cost over \$5000.

Great Activity in Fairmont District—\$2,000,000 Power Expansion Program a Big Factor.

Fairmont, W. Va.—Manufacturing plants in this vicinity are declared to have larger payrolls now than at any time in their previous history. Construction work is going rapidly ahead and the activity indicated for next year is extensive. Coal mines are operating on an unusually high basis.

The Monongahela Power & Railway Co. has plans for a \$2,000,000 expansion program and this will make possible further strides in industrial development. Two additional boilers will be placed in the Rivesville Power plant; additional high tension switching and transformer equipment will be invested in Rivesville; numerous high tension lines will be built; new sub stations will be built at Flemington and Clarksburg; another boiler will be added to the Parkersburg plant, together with stoking and other equipment. These items together with the work now under way and that to be authorized early in the new year constitute the company's construction program.

Fort Worth Building Total for 10 Months Nearly \$6,000,000.

Fort Worth, Tex.—The cost of construction for which permits were issued in this city during the first ten months of the year will aggregate \$5,790,270, as based on estimates of expenditures. Of this total, \$2,677,913 represents dwelling construction during the same period. For the first 24 days of November, permits were issued for dwellings representing a cost of \$258,193.

A majority of the homes built this year were of the moderate priced variety, although permits were issued for 122 residences of brick and tile and brick veneer construction.

Work to Start on Welch Grape Juice Unit.

Springdale, Ark.—Work has been started on the first unit of the new Welch Grape Juice Company's plant and it is hoped to complete it in February. The main building of brick and steel construction is 90 x 198 feet. A tract of six acres is owned by the Welch people here.

Already more than 2500 acres of grapes are under cultivation in the surrounding territory of Arkansas and Missouri and this acreage will shortly be doubled.

BIG EXTENSIONS TO OKLAHOMA POWER PLANTS.

Present Construction Program to Be Greatly Expanded—Rapid Growth in Number of Power Users.

Okmulgee, Okla.—Announcement is made that the construction program of the plants and systems of the Oklahoma Gas & Electric Co., the Oklahoma General Power Co., the Fort Smith Light and Traction Co., and the Mississippi Valley Power Co. will be greatly extended. The present capacity of these companies is 34,102 horse power and upon completion of the work under way the total will be 84,102 horse power, a gain of 146 per cent.

Foremost among the improvements is the expansion of the plant of the Oklahoma General Power Co. near Muskogee, originally planned for 10,000 horse power, which will be increased to 30,000 horse power. Also a modern steam generating station of 20,000 horse power capacity near Harrah, about twenty miles from Oklahoma City, will be erected by the Oklahoma Gas and Electric Co. The construction of these two plants is under the direction of the Byllesby Engineering and Management Corporation and when completed they will be splendid examples of modern, efficient generating stations. The plant at Muskogee has been so designed as to permit the use of either coal or oil for fuel while that at Harrah may be operated by coal, oil or gas. The equipment for handling fuel and ashes will be automatically operated.

During 1922 the Oklahoma Gas & Electric Co. has added fifteen new towns to its transmission system, its growth over a period of years having been very steady. Nine of the towns added in 1922 abandoned municipally operated plants in favor of central station service. An idea of the growth of the company may be gained from the following table:

Number of Electric Customers.	Connected Load (H. P.)
1918	27,730
1919	31,611
1920	35,485
1921	41,152
1922*	44,850
	100,670

*August 31.

Besides eleven communities served by the Mississippi Valley Power Co. two other towns are supplied on a wholesale basis. Many coal mines are likewise accommodated, an excellent grade of medium hard anthracite coal being produced. Moreover prosperous communities in western Arkansas devoted largely to the raising of cotton, corn, alfalfa, and various fruits utilize this power. The communities to which transmission lines have been extended are rapidly developing and the demand for electric power is steadily increasing.

Orlando National Bank Will Erect \$350,000 Building.

Orlando, Fla.—Contract has been awarded to A. Bentley & Sons Co., of Jacksonville, for the building which the Orlando Bank & Trust Co. will erect here.

The structure will be 10 stories, 46 by 76 feet, of steel and concrete, and will cost \$350,000. The general contract covers the construction of the building complete, except elevators and banking room fixtures. W. L. Stoddart, of New York, is the architect.

St. Petersburg to Have \$1,000,000 Hotel.

St. Petersburg, Fla.—Plans are developing for the erection of a new \$1,000,000 hotel in this city, to contain 250 rooms. It is said that preliminaries are being perfected but no details have been announced. S. Lund, proprietor of the Huntington Hotel, is one of the local capitalists declared to be backing the enterprise.

ACTIVITY AT MELBOURNE, FLA.

Selling Peppers at \$8 a Basket.

Mr. Wm. T. Wells, of Melbourne, Fla., in the course of a letter to the MANUFACTURERS RECORD giving some account of the developments under way in and around that town, writes:

"Some time ago the town voted for a bond issue of \$75,000 to pave some of our streets. This work is now being done. The bridge over the Indian River to the ocean resorts of Indian River and Melbourne Beach is being put in better shape and they are about to encase the piles with cement to guard against the teredo. This bridge has opened up a great tract of very desirable lands bordering the ocean. The county has laid out considerable road close to the water and we will soon have a beautiful driveway.

"In the town itself there is great activity in building and much property is changing hands and big buildings are being planned.

"One of the most promising conditions is the cultivation of parts of the long tract of rich lands that border the Indian River and is drained by creeks that traverse it and empty into the Indian River. There is no flooding possible and the grower need fear no such trouble from water as is being experienced by sections further south.

"At present the growers in the Malabar section are shipping peppers in quantity for which they are getting about eight dollars per basket or crate. Pretty big money for Florida AIR as that is mostly what peppers seem to be. It really looks as if we would get the long delayed boom that so many have looked for, but which was delayed by the hope of drainage of muck lands, the many settlers not knowing that flat woods lands would pay more money in crops than any muck land has ever paid and at half the expense."

Contract Let for \$1,000,000 Club Building.

St. Louis, Mo.—The City Club has awarded contract to the Humes-Deal Co., local contractor, for the erection of its proposed \$1,000,000 club building and expects to break ground in January.

The structure will be 15 stories, of Gothic architecture, and will contain 105 bedrooms, 12 private dining rooms in addition to a dining room on the top floor, lounging room, auditorium to seat 1200, library, banquet rooms, club rooms and other features.

Plans and specifications for the building were prepared by the T. P. Barnett Co. of St. Louis.

Railroad Will Build \$450,000 Hospital.

Little Rock, Ark.—A hospital to cost \$450,000 will be erected at Little Rock by the Missouri Pacific Railroad Co., according to the announcement of Dr. W. E. Smith of this city, who is division surgeon for the railroad.

The building will be 4 stories, and basement, 81 by 126 feet with wings. It will be constructed of reinforced concrete, steel and brick, the foundation to be of sufficient strength to support additional stories. A total of 125 beds will be provided. The basement will contain a refrigerating plant, laundry, boiler rooms, smoking rooms, etc.

H. J. Moler of St. Louis is president of the Hospital Board of Managers.

\$101,000,000 in Shoes from One St. Louis Plant.

St. Louis, Mo.—In the year ending November 30 shoes valued at more than \$101,000,000 were shipped from the plant here of the International Shoe Company. Production is now running at the rate of over 140,000 pairs a day, and the leather used is tanned in the company's own plants in Illinois, Pennsylvania, New Hampshire and North Carolina.

Plans to Erect Modern Hotel at Daytona.

Daytona, Fla.—Following the purchase of a site at Ridge-wood and Volusia Aves., by Gordon B. Hayward, it is announced that a modern hotel will be erected. Plans are now being drawn and will start at once on clearing the site which is occupied at present by a three-story building.

HOGS "MOP UP" THE 150 ACRE SWEET POTATO PATCH AFTER BEST OF CROP HAS BEEN TAKEN.

Harvesting the Crop From 1,500,000 Sweet Potato Plants on Miller 101 Ranch.

[Special Correspondence Manufacturers Record.]

Ponca City, Okla., December 18.

"Time is nothing to a hog," is the conclusion reached by Col. Joseph C. Miller, the agricultural manager of the 101 Ranch here. "He will fatten in less time on corn than on sweet potatoes, but corn is 75 cents a bushel and sweet potatoes are also an excellent hog feed; you might as well, therefore, let him live longer on sweet potatoes and get just as fat in time."

It is for this reason that a herd of one thousand hogs is being permitted to "mop up" in a hundred and fifty acres sweet potato "patch" after the farmhands have selected the finest potatoes for the drying or curing house.

"It is also a money making proposition," continued Col. Miller, as he pointed to the hogs rooting in all directions, "for you will notice that they do their own harvesting."

It required a total of sixty men and the use of nineteen teams of horses and mules to harvest the 101 Ranch crop of sweet potatoes this fall, or the crop from 1,500,000 plants set out late last spring. Very early in the spring the Millers planted 600 bushels of sweet potatoes in order to provide the plants. The spuds were placed in earth one foot thick on top of rows of 8-inch tiling which connected with an oven and carried the heat underneath the potatoes and hastened their sprouting and growth. In all there were twenty-five beds, each 8 feet wide by 60 feet in length and each underlaid with the tiling. Thus the Millers grew their own sweet potato plants.

"The fact is perhaps not generally understood," says Col. Miller, "that sweet potatoes have yielded \$100 per acre more in Oklahoma, during the past three years, than any other

and it was decided to comb the entire 150 acres for the choicest potatoes and then let the hogs have the remainder.

The average yield of the 101 Ranch sweet potatoes, this fall, was 250 bushels per acre, of which it is estimated the hogs got all of 50 bushels per acre. The 30,000 bushels were placed immediately in an immense drying or curing house for sale in the late winter and early spring, when the price



SWEET POTATO DRYING HOUSE ON 101 RANCH.

will be considerably higher. As a rule sweet potatoes bring around 7 cents a pound at that season of the year.

"We have fully demonstrated that a frost will not injure the sweet potatoes themselves," says Col. Miller. "It takes a freeze, hard enough to reach down to the spuds, to harm them. It has been believed generally that a frost puts black streaks into sweet potatoes. This is not true. We did not start to harvest our crop this fall until after there had been a heavy frost. The vines blackened and died. The potatoes were not injured at all. When the potatoes are cultivated



HARVESTING THE CROP FROM 1,500,000 SWEET POTATO PLANTS.

crop." He insists also that sweet potatoes should be planted in the same ground but once in every four years, as in all sweet potatoes there is a black rot that inoculates the soil. It is more profitable, he maintains, to grow sweet potatoes on a big scale if one has sufficient land so that the planting place may be changed annually.

It was the original intention last spring to plant 100 acres of sweet potatoes for commercial purposes and 50 acres for the hogs. The 50-acre patch was planted as late as July 5 and it was thought these would not mature to sufficient size by harvest time. The contrary proved to be correct, however,

the last time there should be sufficient dirt thrown up to give them ample protection." He maintains, too, that they should be rooted deeply to start with.

The 1,500,000 sweet potato plants were set out at least partly by machinery on the ranch last spring, and two machines were used. It requires three men to each machine, or one man and two boys. The man drives a team and the boys sit on boards that protrude from the rear of the machine, which has the general appearance of a cultivator. Every time the mules step, the machine makes two holes in the ground, one inside each wheel. Into these holes the boys,

riding behind, place the sweet potato plants, and the machine then completes the job by squirting some water in the hole and pressing the earth around the plants.

The big drying house on the ranch where the sweet potatoes are cured so they may be marketed in the late winter, holds 30,000 bushels. It is divided into three separate compartments by two long run-ways, down which teams may be driven and the potatoes unloaded into bins of which there are 20, each holding 1500 bushels. These bins are built after the fashion of corn cribs so the air may circulate freely. To each bin, or for each 1500 bushels of potatoes, there is a stove placed in the drying house, or a total of 20 stoves, kept going until the spuds are sufficiently cured. In addition to a stove there is a big electric fan in each room and this keeps the hot air in circulation. The rooms are separated by heavy curtains and as fast as a bin is filled the curtain is dropped and the stove and fan turned on.

"It is our intention to attempt to save both Irish potatoes and Bermuda onions by handling them in the drying house just like we do the sweet potatoes," says Col. Miller. "We have a big Irish potato crop each summer and we have demonstrated that Bermuda onions will grow just as fine and just as sweet in Oklahoma as elsewhere, but neither of these summer crops will keep long. We are going to put both in the drying house next summer and hold them for sale during the late summer period, when both Irish potatoes and Bermuda onions are scarce as a rule in this part of the country." By the time the Millers want to put the Irish potatoes in the drying house the sweet potatoes will have been marketed. No stoves will be used during the summer period, only the circulation system. The Millers contend that if they are successful in keeping both these crops, they will at least save the freight by having them for local markets. They experimented with planting Irish potatoes early in September this year, and now they are marketing several hundred bushels of "new" potatoes.

A sweet potato patch of at least 200 acres will be planted again next spring on the ranch, but on separate ground. Sixty acres of the land used this year have been planted already to apple trees, and the remainder will be put in other crops.

The Millers will soon have 260 acres in apples, 160 acres of which are now bearing. To care for the windfall of the annual crop an extensive cider and preserving house has been constructed and was in operation this fall for the first time. It has a capacity of 1000 bushels of apples daily and sterilized cider, vinegar, apple butter and jelly are the products. The 160 acre orchard yielded 20,000 bushels of apples for sale this fall, in addition to the windfall crop.

"In putting away our sweet potato crop of 30,000 bushels this year, the highest amount stored in any one day was 3000 bushels," says Col. Miller, "and these were hauled a distance of three miles from the field to the dryer."

The three mile distance will be understood when it is realized that the ranch is now composed of 110,000 acres. The Millers own 35,000 acres in fee, the remainder being Ponca and Otoe Indian lands under lease.

Elks Award Contract for \$1,000,000 Building.

Louisville, Ky.—The George H. Rommel Co. of this city has been awarded contract by the Louisville Lodge No. 8, B. P. O. E., for the erection of its proposed \$1,000,000 building here.

It will be an 8 story and basement structure, 140 by 148 feet, of concrete and steel construction. Bowling alleys will be installed in the basement; the top floor will be used for dormitories. Other features of the building include auditorium, library, gymnasium, social and dining rooms. Joseph & Joseph of Louisville are the architects.

Largest Consumption of Cotton Since 1917—High Record Output in Iron and Steel Shown in November Production Figures.

Continued advances in production and distribution in November are noted in figures recently compiled by the Department of Commerce. The largest consumption of cotton since 1917, and further high records since 1920 in the output of pig iron, steel ingots, zinc, coke, locomotives, and upper leather emphasize the sustained and basic character of industrial production in November. The usual seasonal decline in building contracts in November failed to materialize.

The car shortage on the railroads was slightly relieved, but coal cars were still in great demand and coal loadings have been kept up to the maximum: total loadings of all classes were very high for November. Increased orders were made for locomotives and freight cars to overcome present congestion.

Price levels continued to increase in November, with both the total wholesale and the retail food indices the highest since the end of 1921. The relative purchasing power of farm products was considerably improved in November and this is reflected in the largest mail-order house sales since March, 1920.

The final crop reports for the year 1922 as published in the MANUFACTURERS RECORD last week, indicate a large production of the principal crops, especially wheat, potatoes, corn and rye, and higher prices for cotton should make for increased prosperity in the farming sections.

Increase Reported in Cattle and Sheep on Feed.

Cattle on feed in eleven corn belt states, December 1, increased 27 per cent over the number on feed the corresponding date last year, according to the Agricultural Department. Also there is an approximate increase of 20 per cent in the number of sheep and lambs on feed December 1 compared with 1921. Outside of the corn belt mixed increases and decreases exist. There was a wide variation in the increases in sheep on feed with the far Northwest states ranking highest. Nebraska is the largest sheep and lamb feeding state in the corn belt.

Shipments of stocker and feeder cattle and calves from 67 public stockyards for the four months immediately preceding December were the heaviest on record, being 2,620,000 head, compared with 1,868,000 in 1921, and 2,570,000 in 1919 which was the record year up to 1922.

The increased cost of feed may result in earlier marketing of sheep than usual but the Department points out that an increase in the number of cattle on feed does not necessarily mean a proportional increase in receipts at market during the next five or six months. The proportion of fed cattle to total receipts at the Chicago market seldom exceeds 60 per cent.

Better Marketing Methods for South Carolina Sweet Potatoes.

Florence, S. C.—T. B. Young, president of the South Carolina Sweet Potato Association, and B. S. Meeks, of the Atlantic Coast Line Railroad, have just completed a successful tour of northern cities in the interest of a market for sweet potatoes grown in this state. A system of advertising and marketing has been inaugurated and it is now believed that South Carolina potatoes can be marketed under very favorable conditions. By means of an educational campaign it is planned extensively to develop the use of the sweet potato. One of the features to be emphasized is the packing of quality products in such an attractive manner as at once to secure favorable attention from the consuming public.

Hopewell Adding to Its Industries.

PROGRESS AND EXPANSION TODAY FEATURE THE BUSINESS LIFE OF THIS OLD-NEW CITY.

[Special Correspondence Manufacturers Record.]

Hopewell, Va., December 23.

Progress and expansion are the watchwords with the new peace-time industries now located at the former du Pont gun-cotton plant here. There has been an appreciable increase in population; operating output recently has surged ahead; and plans now under way by plant owners indicate that more activity than ever before will be attained.

The Tubize Artificial Silk Company of America, which is one of the great companies in the United States turning out this product, has now reached a daily production of approximately 8000 pounds. The company is engaged in making extensions that will increase its production. The quality of its product has reached a point where it is considered equal to any artificial silk sold. Its Hopewell plant embraces 100 acres, divided into two areas known as the Chemical and Textile areas.

Approximately 2200 people are now employed by this concern and it is expected that the number will be increased gradually with further facilities for training new workers. It is estimated that the number of employees will reach 2500 within the next six months. The company has in effect the best methods of welfare work for employees, and only recently purchased a village containing about 350 homes in order to provide satisfactory living accommodations for its operators.

Another interesting concern located at Hopewell is the Hummel-Ross Fibre Corporation. Its plant area embraces 144 acres, which is divided into two districts, one containing the pulp mill and the other the paper mill. The daily production of the pulp mill is now fifty tons, but it is expected that it will be increased to 100 tons about the first of the year, at which time the paper mill will have been completed. This mill will contain one Fourdrinier kraft paper making machine, the daily output of which will be 50 tons of kraft paper. The quality of the company's output is No. 1 kraft

paper and pulp, and it is reported to be one of the best grades of sulphate pulp made in the South.

One of the interesting features of this company's location is that it has been estimated that there is sufficient wood for pulp making purposes within a radius of 50 miles of Hopewell to keep up a production of 100 tons daily for 100 years. The plant has been laid out along the most modern lines and there are ample facilities for the distribu-

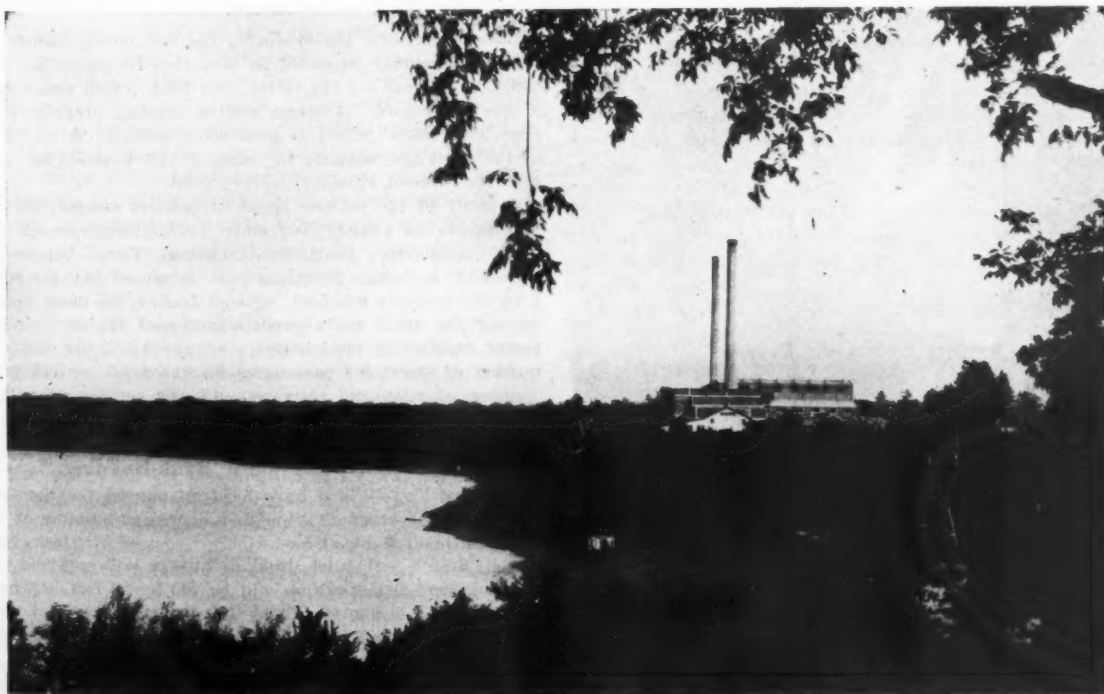


PLANT OF STAMSOCOTT COMPANY, HOPEWELL.

tion of the finished product on the waterways and three trunk lines of railroads.

The company now employs 220 men in the pulp mill, but expect to have a total of 250 about the first of the year, when they will increase the production of pulp to provide for the paper mill. They will have 115 employees in their paper mill, making a total of 365 men. A village has also been purchased for the housing of company employees.

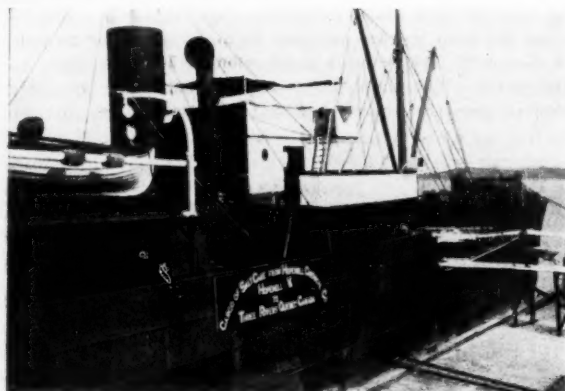
An interesting event recently was the shipment by the Hopewell Chemical Company, a subsidiary of the Hummel-



PLANT OF HUMMEL-ROSS FIBRE CORPORATION IN THE DISTANCE.

Ross Fibre Corporation, of a cargo of salt cake to Three Rivers, Quebec, Canada, by an ocean steamship which came to the City Point wharves. This was the first ocean-going steamship shipment from City Point for at least twenty-five years.

The Stamsocott Company, Incorporated, is another one of the important concerns at Hopewell, which has a program of expansion under way. This plant embraces 100 acres and



CARGO OF SALT COKE FOR THREE RIVERS, QUEBEC.
This is the first ocean-going steamship shipment from City Point in 25 years.

has a capacity of 90 tons of pulp of various grades per day. At present they are expanding because of increased demands. Their output consists of high grade cotton linter paper pulp suitable for bonds, ledgers, blotters, book specialties, etc.

In addition, their Chemical Pulp Department produces from linters high grade bleached cotton of varying viscosities, which are used by manufacturers of artificial silk and leather, celluloid, lacquers, and allied products. The company employs 350 men and has purchased a number of homes for their employees.

The Hopewell China Corporation is contemplating the in-



NEAR VIEW OF HUMMEL-ROSS FIBRE CORPORATION PLANT.
stallation of two additional decorating kilns. At present the company operates seven general ware and six decorating kilns and has an output of 12,000 dozen pieces of ware per week. It makes high grade products of semi-vitreous porcelain. It now has 225 employees, but this number will be increased when the present contemplated expansion of the decorating department is completed.

Other industries at Hopewell are manufacturing high grade

insulating materials; steel specialties; special wood products; dish washing machines; ice; etc.

Dependable electrical power is supplied by a specially constructed high tension transmission line. Excellent filtered water in abundance is available. A magnificent club affords excellent opportunity for athletics and amusement.

A well kept hotel in the residential district is well patronized by both transient and local patronage.

Land values are conservatively set; recent sales of land and improvements show healthy appreciation during the past two years.

The du Pont Chemical Company started the development of this district. In May, 1922, the Industrial Salvage Company, Wilmington, Del., succeeded the Chemical Company and is now continuing the development along the same lines as its predecessor.

Growth of Hendersonville Shown in Vote for \$430,000 Water Bonds and Extensive Road and Street Program.

Hendersonville, N. C.—Hendersonville this year has carried forward the biggest residential and business building program in its history. Indicative of this growth is the voting of bonds for \$430,000, under which a complete water system sufficient to supply a town of 50,000 population is being built.

The country has entered upon a comprehensive road and bridge building campaign. Besides providing main thoroughfares, lateral roads will be extended to link up the various townships. Upwards of \$400,000 will be expended on this work in addition to the work already completed. Hendersonville has completed a large amount of improved paving, and will undertake more of this work next year.

A modern rural school building has been finished at Mills River, and plans for the construction of a centrally located high school are under consideration. Much church building is now going on.

General Advance in Industry and Building at Baltimore.

Building permits issued during the first eleven months of 1922 in Baltimore exceeded in valuation by more than \$1,600,000 the total for the entire year 1921, which established a previous record. A larger winter building program than ever undertaken before is now being pushed. As a result of the sustained advance in industry and business the general employment situation is very good.

A study of the various trade barometers summarized for last month as against November, 1921, clearly reveals the city's satisfactory business condition. These barometers show that building operations have increased 44.6 per cent; postoffice receipts are 5.08 per cent higher; 35 more vessels entered the port; grain exports increased slightly; electric power supplied by local industry advanced 58.2 per cent; the number of street car passengers increased 3.3 per cent; the number of telephone calls was 6.3 per cent greater; and exports were 20 per cent over October, 1921.

\$750,000 Addition to Bank Building.

Houston, Tex.—Plans have been announced for the erection of a nine story addition to the present building of the First National Bank at an estimated cost of \$750,000. Sanguinet, Staats & Gottlieb, local architects, will supervise the construction. The addition will be 100 by 90 feet, the present structure measuring 75 by 100 feet. The ground floor, the main banking floor and the second floor will be devoted exclusively to bank purposes. The old building will be completely modernized and new equipment added. Three additional elevators will be installed.

THE IRON AND STEEL SITUATION

STEEL PRODUCTION FOR 1922 INCREASED 75 PER CENT OVER 1921.

Outlook Generally Favorable for New Year.

Pittsburgh, Pa., December 23.—[Special].—Production of steel ingots in 1922 has been about 34,000,000 gross tons, against 19,224,084 tons in 1921 and 40,881,392 tons in 1920.

In 1921 there was drastic liquidation, not merely of stocks of steel held by distributors and manufacturing consumers, but also of manufactures of steel. The actual ultimate consumption or utilization of steel was greater than the production. A year ago the trade at large did not realize how great an influence this liquidation had had upon the production of steel and there was little disposition to predict much increase in steel production in 1922. Indeed, a year ago many predictions were being made that a revival in steel would not come before autumn. In that case there would have been only three or four months for increased production to impress itself on the year's total.

In point of tonnage the trade proved much better than was expected, for demand began growing at the very beginning of the year, the net result being an increase of 75 per cent in production over 1921.

Steel began growing a trifle scarce in April and May, and by September it appeared very scarce indeed. Conditions were favorable in this respect for price advances, which occurred. It required remarkable conditions to advance prices in a year in which production was only about 65 per cent of capacity. The advances were due to increased costs and the net result has not been advantageous to the steel producing industry, which has had very poor profits, on the whole, in the year. The operation of deflation in costs, which proceeded so well in 1921, was interrupted. The hope of the steel trade now is to maintain prices in 1923 and get costs down.

Steel production and shipments hold up to the October-November rate, which is astonishing in the circumstances, for in December buyers ordinarily desire their receipts reduced, on account of inventory. The condition is not only contrary to the usual experience but is contrary to expectations entertained in the trade a few weeks ago, when it was expected that there would be sharp tapering off in mill operations in the closing months. Several mills, which had planned to close over the entire holiday period, have had to change the program and will resume in full on the morning of December 26. There will be some forced closing for repairs and to allow some departments to catch up with others.

There has been no decline in steel prices, the general market level being the same as one month or two months ago. While there was no expectation that steel prices in general would decline, it was a common prediction six weeks ago that bars, shapes and plates would be well below 2.00c before the end of the year. Instead, they are well maintained at that figure and if anything there is less disposition than formerly to make concessions on particularly desirable orders.

Nearly all the important steel consuming lines are entering the new year in active condition and with assurance, rather than a mere prospect, of heavy operation for several months. The agricultural implement factories have been increasing their production sharply in the past few weeks no doubt on the basis of circumstantial reports received from agricultural sections as to buying conditions, and in this same connection it is to be noted that makers of wire fence are several tens of thousands of tons behindhand in filling their orders. The boom in garage and dwelling house construction continues, being little affected by the season of the year. More than 150,000 freight cars have been ordered this year, and probably

less than half the requisite steel has thus far been made, while buying of cars seems likely to continue for some time. Much the same can be said of locomotives. The automobile trade is planning heavier production than ever. Skeleton steel construction work is not promising and the export market is poor. Practically all other lines of steel consumption are very promising.

The valley pig iron market stands at \$26 for foundry, an advance of \$1 following the heavy covering for first quarter, \$24.50 for basic and \$27.50 for Bessemer.

Feeling of Strength in Birmingham Market—Furnace Interests Sold Well in Advance.

Birmingham, Ala., December 26.—[Special].—The year comes to a close with furnace interests in Alabama well sold ahead for the first three months of 1923 and inquiries in hand for pig iron for delivery during the next three months. Quotations on the close of the year have recovered to \$23 per ton, No. 2 foundry, and indications are that this price will remain firm for some little time. Production is being given every attention and with fairly good transportation facilities there will be prompt deliveries. Consumers of pig iron are willing to receive the product steadily, indicating a need.

The selling impetus of the past few weeks resulting in the booking of a large quantity of business has brought about an excellent feeling as to the strength of the market. Furnace operation will be necessary for at least three months and another buying movement is looked for immediately on the turn of the year, inquiries coming in from some of the steady melters. The larger consumers of pig iron have purchased liberally and at the same time announcement is made that a considerable amount more will be necessary. Cast iron pipe producers in particular are getting in orders which call for tonnage and the needs are being covered as the business is booked. Sanitary pipe makers will also need big amounts of pig iron. Their buying has just fairly started.

The Tennessee Coal, Iron & Railroad Company has blown in the third blast furnace at Bessemer on foundry iron and will in the next few days blow in the fourth one at the same place, all four to produce foundry iron, with six at Ensley and the Alice furnace on basis. The Tennessee Company is reported to have sold a large quantity of pig iron for first quarter delivery. Three furnace interests of this district are out of the market entirely on first quarter iron. The usual lull in the buying of pig iron because of the holiday will not be of long duration, in fact mail inquiries are still reported and negotiations are under way for some tonnage for next year.

The surplus iron on yards on January 1 will be the minimum in many months, in fact, so far as foundry iron is concerned, the tonnage cannot be given any too much consideration in general market conditions. The production is on a pace of about 210,000 tons monthly. This is to be maintained for a while at least, if not for an indefinite period.

Steel mills in the Birmingham district are also well supplied with business for the first half of the coming year, much steel rail to be rolled in this district as well as wire and wire products, rod, angle bars and other shapes in steel.

Coal mining is to be disturbed but little through the holiday season. Estimates of an authoritative nature are announced as to the production in Alabama for the year 1922, the total being given at 16,173,003 tons as compared to 13,015,007 tons in 1921, a difference of 3,157,996 tons. The Government from week to week is given estimates of the output and these will show the total above given.

All development work is to be pushed to completion. The

McWane cast iron pipe works will be finished by March. The Birmingham Machine & Foundry Company will build another sanitary pipe plant and the National Cast Iron Pipe Company plans an addition to its pressure pipe plant at Tarrant City near here. Two large cement works are going on in the immediate Birmingham district, the Tennessee Coal, Iron & Railroad Company and subsidiary companies have in hand development of immense proportions which is being pushed. The 25 additional Koppers ovens of the Alabama By-Products Corporation at Tarrant City will be making coke the coming week. The work on laying mains from this plant to East Birmingham where the Stockham Pipe and Fittings Company will use the by-product gas in its daily operation is progressing nicely.

Coke is in good demand in the South and the production in this district is to be kept up right along, increasing some in the near future. Local demand continues strong while outside interests are beginning to make inquiries for the coming year. Considerable coke is due on old contracts. The local consumption by reason of the active pig iron production and steady operation of foundries and machine shops is heavy and promises to keep up for quite a while.

Sudden improvement in the scrap iron and steel market has brought about a decidedly better feeling. Dealers have taken on some business which will cause steady delivery of the product for at least two months. Dealers have also been replenishing their stocks and assert that they are in position to fill any and all orders that may come in. Inquiries are expected on the turn of the year which will call for considerable old material to be used by foundries in the home territory.

A better demand for charcoal iron is noted and sales have been made on the advancing market. The lowest price recently was \$32.50 per ton with several sales made at \$33 and even as high as \$35, immediate delivery. Resumption of furnaces on this class of iron will be announced after the turn of the year, surplus stock now caring for this business.

Quotations of pig iron and iron and steel scrap:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$23.00 to \$25.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$23.50 to \$25.50; iron of \$2.75 to 3.25 per cent silicon, \$24.00 to \$26.00; iron of 3.25 to 3.75 per cent silicon, \$24.50 to \$26.50; iron of 3.75 to 4.25 per cent silicon, \$25.00 to \$27.00; charcoal iron, f. o. b. furnaces, \$32.50 to \$35.00.

OLD MATERIAL.

Old steel axes.....	\$24.00	to	\$26.00
Old iron axes.....	23.00	to	25.00
Old steel rails.....	20.00	to	22.00
Heavy melting steel.....	15.00	to	16.00
No. 1 R. R. wrought.....	19.00	to	20.00
No. 1 cast.....	20.00	to	21.00
Stove plate.....	17.00	to	18.00
Old tramcar wheels.....	17.50	to	18.50
Machine shop turnings.....	10.00	to	11.00
Cast iron borings.....	10.00	to	11.00
Cast iron borings (Chem.).....	15.50	to	16.00

United States' Pig Iron and Steel Production Four Times Larger Than Its Nearest Competitor's Output.

On the basis of ten months already recorded, Great Britain's output of pig iron in 1922 stands fourth, as compared with other iron producing countries, and its production of steel ingots third, states a report to the Department of Commerce. Again, as in 1921, the United States, France, and Germany have exceeded Great Britain in output of pig iron; and the United States and Germany have outdone Great Britain in steel ingots.

The average monthly production of pig iron in these countries in 1922 has been: United States, 2,092,220 tons; Germany, 510,000 tons; France, 393,660 tons; Great Britain, 387,190 tons. Monthly steel ingot averages are: United States, 2,702,100 tons; Germany, 725,000 tons; Great Britain, 467,700 tons; France, 351,000 tons. Belgium and Luxemburg fall well below Great Britain in both pig iron and steel ingots.

RAILROADS

Edenborn Buys Texas Line as Planned.

The branch line of the Missouri, Kansas & Texas Railway running from Shreveport, La., to McKinney, Tex., about 185 miles, was purchased at the sale December 16 at Greenville, Tex., according to a press report from there, on behalf of William Edenborn, of New Orleans, president of the Louisiana Railway & Navigation Company, the price paid being \$700,000, the upset figure named by the court.

The purchase of this property by Mr. Edenborn was forecast several months ago when application was made in Texas to obtain a charter for the Louisiana Railway & Navigation Company in that state. The branch purchased is known as the Sherman, Shreveport & Southern Railway and it is understood that Mr. Edenborn and associates some time ago acquired most of the first mortgage bonds upon it. The foreclosure sale and his normal bid will now close his hold upon the road as soon as the sale is approved by the court.

When the two roads are actually connected up the Louisiana Railway & Navigation Co. will have a railway about 490 miles long from New Orleans via Shreveport to McKinney, the addition to the Louisiana property giving access to an extensive business territory that will contribute a large amount of traffic to the main line and stimulate industrial and commercial activities adjacent thereto.

Novel Plan for Railroad in Lumber Region.

The National Lumber Manufacturers Association reports that Arthur W. Arnold, president of the Chamber of Commerce of Lapine, Oregon, has devised a form of railroad that can be cheaply constructed and thus afford transportation facilities for a large region in the central part of Oregon where there are no railroads and where the trunk lines do not care to build, it is stated, because there is not sufficient traffic in sight to warrant such construction as they would have to do. Mr. Arnold's idea is a modification of the wooden tramway in that it provides for wooden tracked railways with motor engines and cars having rubber tired wheels, but with flanges to keep them on the track, the rails being 8 inches wide and the tires of equal width. As lumber is cheap there it is estimated that such a railroad could be constructed for about \$3300 a mile. In support of this idea it is stated that the air is very dry in the country where it is proposed to build the railway; it averages about 4000 feet above sea level and the climate is mild. It is further remarked that with so low a cost of construction for a railway it would be easy to provide enough traffic to make it pay. News of this novel mode of building a railroad is presented here because it may possibly be of value to Southern lumbermen and others who are confronted by transportation problems.

Completing \$8,000,000 Improvements.

The Missouri, Kansas & Texas Railway is completing several important terminal improvements, one of them being the 1,000,000 bushel grain elevator at Kansas City that is expected to be finished early in the spring, another being the large freight yards at Denison, Texas, which will be completed next summer, and the new engine shops at Waco, Tex. The last two combined involve an expenditure of about \$5,000,000. In addition to these, new freight stations have been erected or are being erected at half a dozen points including Fort Worth, Dallas, Wichita Falls, San Antonio, and Waco, Tex., Oklahoma City and Muskogee, Okla. New shops and roundhouses have also been built at the latter cities. Altogether about \$8,000,000 will have been expended when all is done.

Extension to Be Built Through Oil Lands.

The Okmulgee Northern Railway, 21 miles long from Okmulgee to Henryetta, Okla., will build an extension of 25 miles from Coalton, 13 miles out from Okmulgee, to Checotah, connecting there with the main line of the Missouri, Kansas & Texas Railway. Construction will begin in 1923, according to a report from Okmulgee which says that J. J. Schock, general manager, made the announcement to the directors of the Chamber of Commerce, also stating that arrangements had been made in St. Louis for financing the work. There seems to be a possibility of the extension making the desired connection at Eufaula instead of at Checotah, and a choice may depend upon the acquirement of the rights of way for the road.

It is further noted that the Schock interests, which control the Okmulgee Northern Railway—E. E. Schock, of 61 Broadway, New York, being president—also control the Indianola Refining Company of Okmulgee, and the extension will traverse a rich oil producing territory, besides good agricultural lands. The estimated cost of the new line is \$1,250,000.

Freight Movement Continues Large.

There were 919,828 cars loaded with revenue producing freight on the railroads during the week ended December 9 or over 74,000 more cars than were thus loaded during the previous week, according to reports received from the carriers by the American Railway Association. The total for the week was 178,000 cars more than were loaded during the same week of last year and 81,000 more than were loaded during the same week in 1920. Coal loadings for the week totaled over 200,000 cars, or 14,300 more than in the previous week and more than 62,000 cars as compared with the same week of last year.

There was a decrease of nearly 22,000 cars in the shortage of freight cars between December 1 and 8 and on the latter date the total shortage was 111,961 cars. On December 1 serviceable locomotives totaled 46,525, an increase of 424 as compared with conditions on November 15. The number of cars in serviceable condition also increased during the two weeks period.

Will Burn Oil in Many Locomotives.

The St. Louis Southwestern Railway Co. has closed a contract for a three years supply of oil for engine fuel, the purpose being to convert a number of coal burning locomotives to oil burners on such of its lines as are near a good oil supply. There will be about 20 engines so converted at a cost of about \$500,000.

The company also has announced plans to purchase new equipment including 15 large freight locomotives, 500 box cars, 500 automobile cars, and 200 coal cars, the estimated cost of this equipment being about \$3,250,000.

These expenditures are part of the \$5,000,000 improvement plans recently announced and which will also include relaying busy sections of main line with heavier rails.

A North Carolina Road to Be Sold.

The Carolina & Yadkin River Railway, 36 miles long from High Point to Denton and High Rock, N. C., is to be sold at High Point on January 16, by L. H. Hole, Jr., special commissioner, who is also receiver of the line. The upset price is \$200,000.

Half a Million for Improvements.

Plans to spend \$500,000 on the lines and the power plant of the El Paso, (Texas), Electric Railway Company during 1923 have been approved, according to dispatches from that city. A. H. Warren is general manager.

Good Roads and Streets

Missouri Awards Twelve Contracts Totaling Over \$1,341,000 for 63 Miles of Roads.

Jefferson City, Mo.—Contracts have been awarded by the State Highway Commission for the construction of 63.5 miles of roads, involving a cost of more than \$1,341,000, and apportioned to several counties. Two sections in Jackson county, on which bids have been received, have not as yet been awarded.

The following awards have been made: Atchison county, 4.864 miles, route 1, section 7, to W. R. Larson, Sioux Falls, S. D., \$70,318; Butler county, 10.147 miles, projects 204-A and 204-B, Robertson & Taylor, Poplar Bluff, Mo., \$329,000; Cape Girardeau county, 2.585 miles, route 25, section 19, Carroll, Bedwell & Harfel, Cape Girardeau, \$31,913; Caldwell county, 9.868 miles, route 8, sections 12 and 13, Harrison Engineering & Construction Co., Wichita, Kans., \$425,298; Clinton county, 1.6 miles, route 33, section 9, J. O. Patterson & Co. Kansas City, Mo., \$12,612; Clinton county, 4.016 miles, route 33, section 9, Land Construction Co., St. Joseph, Mo., \$23,954; Franklin county, 6.638 miles, route 14, sections 66 and 67, Frazier Davis, St. Louis, \$47,400; Jefferson county, 4.132 miles, route 25, section 2, W. J. Knorpp and James Richardson, De Soto, Mo., \$28,883; Jefferson County, 4.012 miles, route 25, section 2, same contractors at \$18,528; Miller county, 4.991 miles, route 15, section 56, Fogleman Thompson, Eugene, Mo., \$19,749; Miller county, 4.078 miles, route 15, section 57, same contractors at \$14,433.

Bullock and Lee Counties Open Road Bids Totaling \$525,000.

Montgomery, Ala.—Bids have been opened by the State Highway Department for the construction of two road projects in Bullock county and one in Lee county, totaling \$524,631. Bridges on the latter highway are included. These roads embrace Federal Aid Project No. 68, in Bullock county, for which D. R. Cook, of Selma, submitted the low bid at \$225,878, and Federal Aid Project No. 1 in the same county, for which Kenan & Kyser, of Selma, submitted a low bid of \$91,950. The two projects will provide a continuous gravel road from Union Springs to the Montgomery county line, a distance of 18.67 miles.

The Lee county project, which will also be of gravel construction, covers a distance of 14 miles from Opelika to the Tallapoosa line beyond Waverly. R. D. Chambers, of West Point, Ga., is the low bidder at \$172,049. Low bid at \$34,789, for the construction of bridges on this highway was submitted by the Newell Contracting Co., of Birmingham.

Hillsborough County Sells \$1,500,000 Road Bonds.

Tampa, Fla.—Road bonds to the amount of \$1,500,000 have been sold by the Hillsborough County Board of Commissioners at a premium of \$25,000. An additional amount of \$1,050,000 will be sold as needed for the completion of the program of road building which will soon be started.

The county plans to construct 100 miles more of improved highways and expects to complete these roads within a period of two years.

Huntington Completes Big Paving Year.

Huntington, W. Va.—This year was one of the biggest paving years in the history of Huntington, according to the annual report made by City Engineer Maupin. More than seven miles of paving were completed at a cost of about \$475,000, and unfinished work will greatly increase the mileage. The city now has ninety miles of paved streets. Paving work in 1923 will involve a big expenditure.

LUMBER AND BUILDING MATERIALS

Useless Metal Lath Weights Eliminated—133 Varieties Discarded.

Reduction from more than 80 varieties to 10 of expanded flat metal lath and from more than 70 to seven in three-eighths-inch expanded rib lath now being used extensively in the building industry, was recommended recently at a conference of metal lath manufacturers, users and distributors held at the Department of Commerce under the auspices of the Division of Simplified Practice.

The results of a survey of the excess and useless weights of metal lath, made by the Metal Lath Manufacturers Association, were used as a basis for elimination and retention. The adoption of the following recognized standards of weight in this commodity during the year July 1, 1923, to July 1, 1924, was recommended by the conference.

FLAT EXPANDED LATH.

Painted Steel	Special Metal	Galvanized Before
2.2	2.2	2.2
2.5*	2.5*	2.5
3.0*	3.0*	3.4
3.4	3.4	3.4

3/8-INCH RIB EXPANDED LATH

2.5	3.0*	...
3.0*	3.0*	...
3.8*	3.8*	...
4.8	4.8	...

*The conference urged that every effort be made in the industry to direct practice to a consolidation of the two starred sizes to a single intermediate weight, this to be made effective, if possible at the next conference.

Tolerance to be not greater than plus or minus 0.1 per square yard.

The conferees are of unanimous agreement that adoption of the recommended standard weights, which will amply supply the needs of construction, by the industry as a whole, will result in the greatest benefit to manufacturers, distributors and users of the article affected.

Completing Crate and Package Plant.

Hazlehurst, Miss.—A modern crate and package mill for the Utica Box Co., of Utica, Miss., is being completed and is expected to be ready for operation within a few weeks. The mill will be electrically driven, current to be provided by a large power plant on the premises of sufficient capacity to supply current to the entire town, a contract having already been made for furnishing light and water for five years.

Machinery is being installed in the mill and the company is erecting a number of cottages for its officers and employees. H. J. Wilson, of Hazlehurst, will manage the plant.

Cochrum Lumber Co. to Increase Capital and Make Improvements.

Knoxville, Tenn.—The Cochrum Lumber Co. has applied for permission to amend its charter in order to increase its capital stock from \$50,000 to \$125,000. It is the purpose of the company to make improvements and additions to its plant.

The incorporators include W. A. Cochrum, Dudley D. Cochrum, Kate D. Cochrum, Mae C. Cochrum, John A. Cantwell and Carl B. Sherrod.

Southeastern Veneer Association Elects.

High Point, N. C.—At the annual convention of the Southeastern Veneer Association, held recently in this city, the following officers were elected: L. V. Phillips, President, Lexington; Frank Thompson, Vice President, Cleveland, and J. C. Hill, Secretary-Treasurer, High Point.

Lumber Industry Approaches End of 1922 in Good Condition.

Washington.—A composite of the views of the different softwood lumber manufacturing associations, received by wire by the National Lumber Manufacturers Association, as to the present business position of the lumber industry, indicates a sound condition in the industry at the close of the year. On the whole transportation conditions are much improved; labor is more plentiful, with still a tendency toward higher wages; and demand seems to be unusually strong for what is ordinarily a dull season in the lumber industry. As weather conditions compel a degree of suspension of production in the north and on the West Coast, the new business is keeping step with production.

The Southern Pine Association wires from New Orleans that although the orders of Southern pine manufacturers have piled up heavily because of the car supply stringency:

"This situation has been generally alleviated and shipments during November were approximately 25 per cent higher than in October, and this tendency appears to be continuing. Last week's reports show record-breaking demand and reflect more favorable conditions than in any similar period of any previous year. Although it is customary for mills to let up at this time of year, our 'barometer' shows that orders received were 78 per cent higher than the average of the same week for the past four years, shipments 40 per cent larger, production 19 per cent greater. December sales prices for Southern pine show little change from prices of sales in the preceding month but represent an advance of about 30 per cent over January 1, 1922 prices."

The West Coast Lumbermen's Association telegraphs from Seattle:

"Heavy snow and cold weather of the past ten days are responsible for the decreased production of mills. For past three days weather has been warmer with chinook wind rapidly removing snow; if it continues a few days will permit resumption of logging operations immediately after Christmas. The available log supply in the water is limited. Both domestic rail and water-borne shipments demand is good. The offshore demand continues steady and heavy inquiries are reported from lumber yards. The car supply has been slightly better for the past three weeks but is now being curtailed by middle western snow and cold weather which are retarding the movement of empties as well as of loaded cars. It is the general understanding that demand and stock conditions will cause a shortening of customary Christmas shut-down."

The North Carolina Pine Association wires from Norfolk, Va.:

"Labor is still scarce, car supply is better, log supply is adequate, the cold weather and snow have somewhat restricted operations; stocks are very much broken."

The Northern Pine Manufacturers Association wires from Minneapolis:

"Of the nine mills reporting this week only four are sawing. Stocks are rather broken and two mills report them to be below normal; with the others they are normal. There is a scarcity of lower grade boards. The car supply is about sufficient to meet requirements. There is still a shortage of labor in the woods but conditions are improving and the weather is favorable to logging operations. Total shipments of Northern pine for 1922 will exceed production by from 30 to 35 million feet."

Telegraphing from Portland, Oregon, the Western Pine Manufacturers Association says:

"Of our reporting mills sixteen are closed; thirteen suspending operations within the last two weeks. The extreme cold and heavy snow are impeding both production and shipments. The car supply is spotted but probably improved. However, westbound empties are held up by snow. Lumber demand is strong and dry stock is scarce in most items."

From San Francisco, the California Redwood Association wires that the labor supply is satisfactory, the car supply short but slightly better and weather conditions unfavorable, but orders and shipments still well above normal. The Cal-

foria and foreign demand is heavy and the eastern demand is satisfactory.

Telegraphing from San Francisco also, the California White and Sugar Pine Manufacturers Association reports the labor supply to be normal and likewise the car and log supply. "But most mills in the California pine region are closed as usual at this season on account of weather conditions. Stocks are below normal. The largest demand is from Missouri River points."

From Oshkosh, Wisconsin, the Northern Hemlock & Hardwood Manufacturers Association reports that its hardwood production and shipments are increasing and running above normal for this season, and continues:

"No. 2 and better stocks nearly as low and as broken as in October, 1919. The weather continues favorable for work in the woods and the supply of labor for the camps is rapidly increasing and is now equal to 90 per cent of requirements as against 60 per cent last month. The wage trend continues upward. The car supply is easier. The inquiry for hardwoods is noticeably heavy."

The total number of mills reporting to the National Lumber Manufacturers Association for the week ending December 16 was 395, as against the revised number of 406 for the preceding week. Due almost, if not wholly, to weather conditions, both of a seasonal and exceptional nature, the production of these mills fell off about 18,000,000 feet from the preceding week. Shipments showed a very slight increase notwithstanding the obstacles to transportation caused by snow and cold in some sections; while orders increased over 14,000,000 feet, indicating an exceptionally favorable condition of trade for a usually "dead" period of the year. In percentage terms the mills of the eight associations reporting gave their shipments as 113 per cent and their orders 117 per cent of current production. The Southern Pine Association mills give their shipments as 108 per cent and their orders as 127 per cent of production, while the West Coast Lumbermen's Association mills report shipments 112 per cent and orders 114 per cent of production.

For those of the above mills—363 in number—that have an established normal production figure for the past week, it being 228,467,315 feet, actual production was 82 per cent of normal, shipments 91 per cent and orders 97 per cent.

The following is the summary of the softwood lumber movement for last week:

Mills	Last Week Feet	Corresponding Week 1921 Feet	Preceding Week 406 Feet
Production	197,478,117	166,547,742	215,324,471
Shipments	222,520,985	153,759,364	221,045,284
Orders	231,998,594	145,810,706	217,911,370

For the year, to December 16th, being 50 weeks, the figures of the three factors of the lumber movement are as follows:

	Production Feet	Shipments Feet	Orders Feet
1922	11,066,971,018	10,451,822,103	11,204,506,425
1921	7,920,020,389	7,968,397,681	8,196,965,423
1922 increase	3,146,950,628	2,483,424,422	3,007,541,002

The following is the statistical summary of the lumber movement by regional associations for the past 50 weeks and for the week ending December 16th:

LUMBER MOVEMENT FOR 50 WEEKS, AND FOR THE WEEK ENDING DECEMBER 16.									
	Production		Shipments		Orders				
	1922	1921	1922	1921	1922	1921	1922	1921	1921
Southern Pine Association, Total.....	3,681,674,954	3,457,780,513	3,594,266,955	3,622,588,117	3,760,024,991	3,610,270,970			
Week (129 Mills).....	72,724,095	76,534,677	78,690,780	67,886,640	92,950,641	56,209,284			
West Coast Lumbermen's Association, Total..	4,275,749,669	2,687,703,678	3,945,007,667	2,716,189,125	4,040,493,189	2,783,967,761			
Week (146 Mills).....	87,062,273	62,261,599	97,149,155	52,020,892	99,115,678	60,706,605			
Western Pine Manufacturers Association, Total	1,177,213,000	702,237,082	1,161,222,000	714,800,728	1,193,875,000	723,775,000			
Week (36 Mills).....	12,233,000	9,764,000	17,977,000	17,788,000	16,175,000	14,950,000			
California White & Sugar Pine Mfrs., Total..	538,189,000	340,978,000	355,269,000	261,528,000	826,899,000	451,379,000			
Week (5 Mills).....	3,637,000	no report	3,740,000	no report	3,453,000	no report			
California Redwood Association, Total.....	403,088,000	296,021,000	354,239,000	219,142,000	377,303,000	217,311,000			
Week (14 Mills).....	8,215,000	8,043,000	7,609,000	7,345,000	8,073,000	5,991,000			
North Carolina Pine Association, Total.....	480,375,017	343,464,116	488,770,254	332,708,711	477,951,245	320,114,692			
Week (38 Mills).....	7,603,749	9,158,466	7,466,927	6,776,832	5,175,275	6,166,817			
Northern Hemlock & Hardwood, Total.....	99,979,000	91,845,000	140,026,000	101,441,000	126,108,000	89,647,000			
Week (13 Mills).....	1,414,000	786,000	1,806,000	1,942,000	1,431,000	1,785,000			
Northern Pine Manufacturers Association, Total	410,702,378	4,589,000	413,021,227	5,082,123	401,852,000	5,620,000			
Week (9 Mills).....	4,589,000	no report	5,082,123	no report	5,620,000	no report			
General Total for 50 weeks.....	11,066,971,018	7,920,020,389	10,451,822,103	7,968,397,681	11,204,506,425	8,196,965,423			
General total for week.....	197,478,117	166,547,742	222,520,985	153,759,364	231,998,594	145,810,706			

Demand for Lumber and Other Building Materials Greatly in Excess of Usual Demand for the Season.

New Orleans, La.—Open weather hitherto has caused the construction industry not only on the West Coast and in the South to keep unusually busy for this period of the year, but also in the East, Middle West and North where ordinarily activities slacken early in the season, an enormous volume of work is under way. As a result the demand for lumber and building materials is very heavy and shows no signs of decreasing—in fact, during the past few weeks it has increased to a high level. In addition contracts are being placed for equipment and improvements on the railroads, and this has stimulated purchases.

Lack of transportation facilities makes shipment difficult, especially on orders placed for prompt delivery. Many manufacturers are declared to have refused orders because of the volume of business already in hand. Slackening of buying during the holiday season is anticipated. But just as soon as inventories are completed it is expected that buying will be resumed in volume. Indications are that the stocks of retailers throughout the country are generally low, evidenced by the recent heavy shipments to take care of the abnormal fall demand.

Normally the demand for building materials shows a decided decline during the last three months of the year, but this year sales have steadily increased since early in October. Shipments have likewise increased, and production has been maintained at the approximate level of the summer months, this has been aided by good weather in the producing sections. There is a general fear because of the transportation situation that unless orders are placed early difficulty will be experienced in getting spring deliveries, and this is expected to result in many orders being placed immediately after the first of the year.

Prices have stiffened in a number of cases, and many mills have withdrawn quotations. With such a volume of orders on hand it is anticipated that the production during the early part of 1923 will be on a big scale. Careful surveys of housing conditions throughout the country show that despite the big program of this character that has been under way in volume for the past eighteen months the demand for residential property is far from satisfied. Also the general activity in buying in all lines has stimulated manufacturers to renewed efforts to supply the demand and consequently industrial plants in many varied lines are making extensions and new plants are going up in all parts of the country. The industrial development which has been going ahead steadily since the resumption of general building is now being greatly expanded.

Generally healthy conditions in the lumber industry are reflected in the receipt of orders totaling 4087 cars, containing 92,950,641 feet by 129 mills of the Southern Pine Association for the week ended December 15. The average order received per mill was 720,548 feet.

Prices of Southern pine lumber showed very little change

during November but present prices on selected items are about 30 per cent higher than on January 1, 1922.

A statement issued by the Association in regard to the unusual volume of business is as follows:

"The biggest holiday lumber business in the annals of the Southern Pine Association was indicated in the reports of orders received by the mills for the week ended December 15, as shown in the Association's weekly barometer. Reports from 129 subscriber-mills showed that for last week average orders per mill were 720,548 feet, average shipments were 610,006 feet, average production was 563,753 feet and average unfilled orders were 2,937,197 feet per mill.

"It was stated that orders were consistently higher than for many weeks past at all the mills and the increase in orders was not merely confined to a few mills.

"The heavy increase in demand for Southern pine lumber is considered to be due to the continuance of the remarkable activity in home building and industrial construction even during the winter months, and also to the orders for railroad material."

Southern pine sales on December 1 were about the same as for the preceding months. Small timbers advanced 5.2 per cent, and edge grain B & better 3/4 inch flooring increased 5.6 per cent; while No. 2 dimension 2 x 4 inch 16 feet long declined 5.8 per cent.

Prices as of December 1 represent an increase of approximately 16.3 per cent over those prevailing on June 1 and 29.5 per cent over the January 1 level. Compared with January 1, 1922 the increase is 25.2 per cent, but there is a decrease from prices prevailing on January 1, 1920 of 32.1 per cent.

Herewith is a table of comparative prices on a few items selected from the Southern Pine Association's report of sales which are fairly representative of the general trend:

Average Price f. o. b. Mill, Obtained During 10 Days Preceding:

ITEM	1922			1921		1920		
	Dec. 1	Nov. 1	June 1	Jan. 1	Jan. 1	Jan. 1	Jan. 1	Jan. 1
Flooring, E. G., B&B, 3/4 inches.....	\$75.43	\$71.41	\$59.50	\$57.03	\$66.40	\$95.92		
Flooring, F. G., B&B, 3/4 inches.....	50.29	50.32	44.90	43.80	40.80	85.00		
Ceiling, 3/4 x 3 1/4, B&B.....	41.95	42.45	38.52	36.55	39.45	63.39		
Drop Siding, 3/4 x 3 1/4 or 5/4 B&B.....	48.85	47.97	39.00	39.94	38.24	74.00		
Finish, 1x4, B&B.....	56.46	56.30	51.86	45.76	44.54	84.26		
Car Siding, Lining and Roofing, 4x6, B&B, 9 or 18-feet.....	62.81	63.40	56.36	49.03	45.41	83.91		
Boards, S1S, or S2S, 1x8, No. 2.....	23.76	24.08	21.55	17.62	17.54	41.76		
Boards, S1S, or S2S, 1x10, No. 2.....	24.06	23.77	21.59	17.87	18.13	43.02		
Dimension, 2x4, No. 1, S1S1E, 16 feet.....	30.82	30.93	25.20	20.93	21.09	44.04		
Dimension, 2x4, No. 2, S1S1E, 16 feet.....	25.81	27.39	22.39	17.59	16.07	39.35		
Timbers, 4x4 to 8x8, No. 1, up to 20 feet....	29.53	28.06	22.90	20.25	27.84	37.65		

For the week ended December 15 shipments were 8.20 per

cent above production. Orders were 27.81 per cent above production and 18.12 per cent above shipments. During the week there was an increase in orders on hand of 3.91 per cent. The summary report for the week is as follows:

	Cars	Feet
Orders on hand beginning of week....	16,033	364,638,519
Orders received during week.....	4,087	92,950,641
Total	20,120	457,589,160
Shipments during week.....	3,460	78,890,780
Orders on hand end of week.....	16,660	378,898,380

Knoxville to Have \$250,000 Brick Plant.

Knoxville, Tenn.—A \$250,000 brick plant is to be located here by the Cherokee Brick Company, which was recently organized. A tract of 20 acres of land has been bought near the city, part of the material has been purchased, and a spur track run into the property from the Southern Railway. By spring it is hoped to have kilns in operation with a capacity of 40,000 bricks daily. Both face and common brick will be produced and the most modern labor saving equipment will be installed.

The officers of the company are: J. Albert Robbins, President; E. C. Campbell, Vice-President; E. C. Wright, Secretary and Treasurer.

Louisiana Mill Men Discuss Logging Methods.

New Orleans, La.—A meeting of the Louisiana Mill Managers' Association was held recently in Lake Charles with B. H. Smith of Ludington, president, presiding. The session was largely occupied with a general discussion of logging costs and methods, a feature being an address by H. C. Berckes of the Southern Pine Association, on subjects of importance to the lumber industry. The next meeting is at Elizabeth, La., in January.

5,400,000 Feet of Lumber Through Port of Tampa.

Tampa, Fla.—Shipments of lumber through the Port of Tampa for November reached a total of 5,400,000 feet. Of this total 1,100,000 feet went to Cuba. Most of the other shipments were for North Atlantic ports.

Erecting \$200,000 Woodworking Plant.

Martinsville, Va.—The Lester Lumber Co., Inc. is investing approximately \$200,000 in a complete woodworking plant that will specialize in the production of millwork and house building materials. The original plant of the company was destroyed by fire several years ago and work has been proceeding steadily on the new plant, which will be of fireproof construction. The company reports that the demand for its products is so great that about twice the amount of business

is being offered as can be handled even with capacity operations. In addition to the big house building program under way in the vicinity, established factories are making additions and improvements and new plants are locating in the section.

George T. Lester, president of the company, is superintending the construction work which is being done with his own force. Several units of the new plant have been completed and placed in operation and work is being pushed on the remaining buildings and the installation of equipment, all of which will be electrically operated. Ample provision has been made for expansion, the site owned by the company totaling about 20 acres.



AIRPLANE VIEW OF LESTER LUMBER CO. PLANT NOW UNDER CONSTRUCTION.

TEXTILE

Good Progress on Construction of Sand Springs Cotton Mill—Oklahoma's First Plant for Manufacture of High Grade Textiles.

Sand Springs, Okla.—Construction is well under way here on the Sand Springs Cotton Mills plant, the first Oklahoma cotton mill for the manufacture of high grade textiles. Work is proceeding rapidly on the cotton storage warehouse which will be 75 x 105 feet. The main building will be 235 x 325 feet and plans call for completion of the plant early next year. Orders for equipment have already been placed. The main building will be fireproof, of brick and steel with saw-tooth type of roof to afford plenty of light and ventilation. The warehouse of brick and concrete will be divided into two sections, one part for raw cotton and the other for the finished products. A modern office building will be erected on the site.

It is planned to have the factory running in March, and skilled laborers from other sections will be brought here to train employes secured nearby. When operating at capacity about 700 persons will be employed. About 12,000 spindles and 250 looms are to be installed. The Saco-Lowell Shops, Boston, Mass., have received the order for the spindles and the Crompton & Knowles Loom Works of Worcester, Mass., will furnish the looms.

The work now going forward and that which is planned is the first unit of a large plant and if the operation proves successful other units will be added and finishing plants such as dye works and hosiery mills established.

Nokomis Cotton Mills' Plant Completed.

Lexington, N. C.—The new plant of the Nokomis Cotton Mills has been completed and will have a daily production of 5000 pounds of sheetings. The new loom building is a 3 story structure of brick and cement, and was erected under the supervision of D. K. Cecil, Lexington. Officers of the mills include C. A. Hunt, Sr., President and Manager; C. M. Thompson, Vice President, and J. T. Lowe, Secretary and Treasurer.

German Textile Mills Curtailing.

German textile mills are beginning to curtail operations, according to a report from Consul John E. Kehl. In Lauban and Langenbielau no more operatives are being employed and up to the middle of October the mills had been running full time. The large textile mills at Liegnitz are all still well occupied but the small ones are either laying off employees or running part time.

Reorganized Mills to Operate at Capacity.

Trenton, Tenn.—The Trenton Textile Mills, Inc. is the name of a new firm recently organized here to take over the Lovera Cotton Mills. The capitalization is \$125,000 and the officers are as follows: Sol Shatz, of Kenton, president; I. F. Phillips of Trenton, manager; and Fred Owen of Milan, secretary-treasurer. The mills will be operated at capacity, and extensive improvements are contemplated for the near future.

Knoxville Cotton Mills to Increase Capital.

Knoxville, Tenn.—Application has been made by the Knoxville Cotton Mills for authority to increase its capital stock from \$200,000 to \$400,000, the increase to be paid to present holders as a stock dividend. Among the incorporators of the company are Gen. L. D. Tyson, C. T. Leonhardt, L. T. Lee, Bethe H. Tyson and W. C. Ross.

ONE HUNDRED AND THIRD COTTON MILL FOR GASTON COUNTY.

Prosperity Not Limited to Textiles but Embraces New Business Buildings and Varied Industries.

Gastonia, N. C.—Announcement has been made of the one hundred and third cotton mill for Gaston county, and the Chamber of Commerce declares that this county, now holding fourth rank in producing spindleage in America with 1,129,696 spindles, will soon crowd out Hillsboro county, New Hampshire, for third place in the industry.

Gastonia is progressing rapidly in other lines as well as industrially. Hundreds of thousands of dollars are being expended on the construction of business buildings, schools, churches and residences.

A generation ago there were no cotton mills in the section. About 1840 the first mill was built on the Catawba, and since then the establishment of new mills has taken place periodically until in the recent past the growth of the industry in the county has been little short of phenomenal. Cotton mills have superseded distilleries since prohibition.

Comparatively cheap hydro-electric power, satisfied native laborers from the mountains of the Carolinas and the spirit of co-operation among the local interests have combined to bring about the tremendous development. Originally small mills were built; they prospered and larger mills were built, and new ones are now being started at frequent intervals.

Fine combed yarns have been the specialty of quite a number of mills, and today only New Bedford is recognized as a real competitor in the production of the finest yarns, which enter largely into the manufacture of silk goods. Long staple cotton is used in this spinning, some yarn being so fine that it runs 38 miles to the pound.

The manufacture of automobile tire fabric has become an important industry, and the Loray Mill here owned by the Jenckes Spinning Co., of Pawtucket, R. I., is now one of the largest single unit tire fabric manufacturing in the world.

The American Yarn & Processing Co., at Mount Holly, is handling a large volume of finishing work formerly done at more distant plants.

The Ragan Spinning Co., capitalized at \$500,000, announced recently in the MANUFACTURERS RECORD, is the county's one hundred and third mill, and it is expected that the plant will be in complete operation by September, 1923.

The Third Trust Co., holding company for the Third National Bank, is erecting an 8-story brick and reinforced concrete structure to cost over \$275,000, and besides space provided for the bank and a store on the ground floor, there will be 134 offices. The J. A. Jones Construction Co., of Charlotte, has the general contract for the building.

A \$500,000 high school building is being erected by J. A. Gardner, contractor, of Charlotte, after plans by Street, Chamberlain & White, of Gastonia, as architects.

Work is nearing completion upon the First Baptist Church which will cost \$150,000. The Brown-Harry Co., of Gastonia, are the contractors.

New houses are being built in numbers in and about the city. The total building permits issued during 1921 was 649 with a valuation of \$707,592, and during the first six months of 1922 permits were 397 with a valuation of \$497,777 for the same period of this year municipal improvements totaled \$173,500.

Egyptian Cotton Crop Limited.

The Ministry of Agriculture of Egypt has announced that the decree limiting the acreage of cotton to be planted in Egypt will continue in force during the coming crop year, reports the Department of Commerce.

Cotton Spindles Increase in November.

The Department of Commerce reports there were 37,175,233 cotton spinning spindles in place in the United States on November 30, 1922, of which 34,664,630 were operated at some time during the month, compared with 33,859,076 for October, 33,296,513 for September, 32,499,324 for August, 34,441,419 for January, and 34,428,339 for November, 1921.

The aggregate number of active spindle hours reported for the month was 8,710,224,794. Based on an activity of 25¼ days, (allowance being made for the observance of Thanksgiving Day in some localities), for 8.74 hours per day, the average number of spindles operated during November was 39,469,039 or at 106.2 per cent capacity on a single shift basis. This number compared with an average of 36,834,931 for October, 34,822,378 for September, 34,041,028 for August and 36,074,401 for November 1921. The average number of active spindle hours per spindle in place for the month was 234.

The total number of cotton spinning spindles in place, the number active and the number of active spindle hours for the United States, the cotton growing States, and for those outside the South are as follows:

State	Spinning Spindles	Active Spindles	Active Spindle Hours
	In Place Nov. 30	Active During Nov.	For Nov. Total
United States.....	37,175,233	34,664,630	8,710,224,794
Cotton-growing states..	16,157,559	15,859,962	4,685,995,143
All other states.....	21,017,674	18,804,668	4,024,229,651

Cherokee County's Tenth Cotton Mill Now Building.

Gaffney, S. C.—The Cash Manufacturing Company plant at Blacksburg, the tenth cotton mill for Cherokee County, is expected to be in operation by April 1. The company was organized in October and work started on the plant in November. The mill will be two stories high with basement, and contain 5000 spindles. All the equipment will be electrically operated.

The officers of the company are: J. W. Brown, Spartanburg, President and Treasurer; E. R. Cash, Superintendent.

Monarch Cotton Mills to Erect Dwellings.

Union, S. C.—Contract has been awarded by the Monarch Cotton Mills to the William Goldsmith Co. of Greenville for the erection of 100 dwellings for employes at Lockhart. Work will begin immediately.

The company has also awarded contract for the erection of 50 four-room cottages at its Union plant. The Bailey Builders Supply Co. of Union is the contractor.

Charlotte Knitting Mill to Enlarge.

Charlotte, N. C.—The Charlotte Knitting Mill plans improvements to its building, including new lighting plant, new floors, and other betterments.

Thirty-two new knitting machines will also be installed, which will practically double the capacity of the plant for the production of silk hosiery. Charles L. Okey of New York, is the president of the Company.

Alta Vista Mills \$100,000 Addition.

Charlotte, N. C.—The Alta Vista Mills at Alta Vista, Va., will build a \$100,000 addition to its plant and has awarded contract to The Palmer-Spivey Co., which maintains an office in this city. Construction will be of brick and timber after plans by Lockwood Greene & Co. of Atlanta. The firm also has an office in Charlotte.

To Build Knitting Mill at Albany.

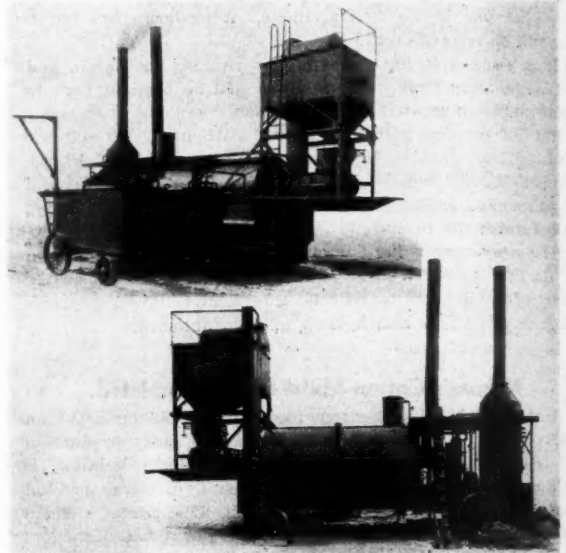
Albany, Ala.—The Cooper-Wells Knitting Co. of Benton Harbor, Mich. is reported to have increased its capital stock \$500,000 and with a portion of the new capital to be made available, will increase the capacity of its knitting mill in Albany. It manufactures hosiery at this plant.

MECHANICAL

New Portable Asphalt Plant.

A number of innovations are embodied in the asphalt plant illustrated here. It is a portable plant of three pieces, namely the dryer and power plant and two asphalt kettles. The manufacturers, the Austin Machinery Corporation, of Toledo, Ohio, say that after a year's test of one of these plants at Topeka, Kans., the plant which is shown in the picture as it is now modified, is deemed the last word in this type of paving unit.

This new Austin plant has a capacity of from 1000 to 1400 square yards of 2-inch asphalt top per eight hour day. The sand dryer will handle 120 tons of sand at 350 degrees Fahrenheit, not to contain more than two per cent moisture.



TWO VIEWS OF THE ASPHALT PLANT.

The dryer sets forth one of the particular features of this new combination. Three drums are built into a unit equal to a single continuous drum four feet three inches in diameter by forty feet eight inches long, giving the material an area of 438 square feet of heating surface. This, multiplied by eight revolutions per minute and the total by four minutes,—the time required for the material to travel through the drums,—gives an area of 12,912 square feet with which it must come in contact. Thus, the highest temperature required is secured at a very low fuel cost.

The asphalt kettles have a total capacity of 2500 gallons. They are heated by steam conveyed through jointless coils. This construction, it is stated, prevents any possibility of damage to the asphalt and is superior to heating by means of an open fire. The pug mill of 1000 pounds capacity is chain driven and discharges through a sliding gate at the bottom. Extra large steam jacketed steam piping is used throughout. Air is used to agitate the asphalt. The hot sand bin is of three compartments with a capacity of ten tons.

Limestone County Will Build \$400,000 Courthouse.

Groesbeck, Tex.—Construction of a modern courthouse has been authorized by the Commissioners Court of Limestone County and work will begin as soon as plans and specifications are prepared. The new building will be of fireproof construction, of brick and concrete, and will cost from \$400,000 to \$500,000.

Construction Department

EXPLANATORY

Additional information is published about all enterprises mentioned in this department as soon as such data can be obtained. Further facts about any incomplete or incorrect item reported in these columns are always appreciated.

DAILY BULLETIN

The Daily Bulletin is published every business day to enable its subscribers to follow up promptly the industrial, commercial, railroad, financial, building and general business development of the South and Southwest. To machinery manufacturers and dealers, contractors, engineers, and others who require daily information of every new enterprise organized and details about important additions to enterprises already established, the Daily Bulletin is invaluable. Subscription price, \$20.00 a year.

Bridges, Culverts and Viaducts.

Ark., Brasfield—Prairie and Monroe Counties and White River Bridge Co., will build bridge across Cache River at Brasfield for Brasfield Highway. Address Judge Watson of Prairie County, Judge Bateman of Monroe County, or Prest. Bovay, of White River Bridge Co.

Ark., Judsonia—White County plans building \$50,000 bridge across Little Red River at foot of Main St., connecting city with territory south of it. Address County Commrs.

D. C., Washington—Government plans building Memorial bridge, from Lincoln Memorial, Washington, to Old Lee Mansion, Arlington National Cemetery, Virginia.

Fla., Jacksonville—Duval County Commrs. will build 2 bridges. For proposal details see Mch. Wanted—Bridge Construction.

Fla., New Smyrna—P. P. Filcher, City Mgr., let contract to Hickey Brothers, Columbus, Ohio, at \$36,000, for 3000 ft. storm water culvert on Canal St. (Lately noted.)

Ga., Augusta—State Highway Comsn., Atlanta, let contracts for following: Cont. No. 1, 1200 ft. creosoted timber bridge, to A. J. Twigg & Sons, Augusta, at \$23,519.68; Cont. No. 2, 4200 lin. ft. earth embankment with sand clay surfacing, to C. G. Teague, Augusta, at \$13,441.67. (Lately noted.)

Missouri—State Highway Dept., Jefferson City, Mo., will build 65 reinforced concrete and steel bridges. For proposal details see Mch. Wanted—Bridge Construction.

Miss., Natchez—For proposal details see Mch. Wanted—Bridge Construction.

Mo., Galloway—State Highway Dept., Jefferson City, Mo., plans constructing concrete bridge over James River on Springfield-Ozark road, near Galloway; financed by Federal Government and Highway Comsn.

Mo., Lexington—Lafayette County will construct approaches to free bridge over Missouri River; has voted \$180,000 bonds. Address County Commrs.

Mo., St. Louis—City, Terminal Railroad Assn. and Missouri Pacific R. R. will build 14th St. viaduct, from Spruce St. on north of Mill Creek Valley to Chouteau Ave., on south, 1200 ft. long, 80 ft. roadway, cost \$595,000; Terminal and Missouri Pacific to pay \$300,000. Address The Mayor.

Okla., Oklahoma City—City, Warren E. Moore, Commr. of Public Works, let contract to Smith Bros., Dallas, Tex., at \$100,000, to construct underpass for 23rd St. road, under Santa Fe tracks; railroad to pay \$70,000, and city \$30,000; B. M. Hart, City Engr.

Okla., Pawhuska—Osage County. Will M. Clark, Engr., let contracts for 8 bridges, costing from \$2000 to \$18,000 each, as follows: Over Choteau, Charlie, Mission, Kemper, Tate, Solomon, Little Chief and Dog Thresher Creeks. (Lately noted.)

S. C., Greenwood—For proposal details see Mch. Wanted—Bridge Construction.

S. C., Society Hill—Darlington and Marlboro Counties contemplate building bridge across Great Pee Dee River. Address County Commrs.

Tennessee—State Highway Dept., Nashville, Tenn., let contracts for steel and concrete bridge in Giles County, over Elk River, F. A. Proj. No. 25, to Montgomery & Parker Contracting Co., Rockport, Ind., at \$61,482. (Lately noted.)

Tex., Bellville—For full details see Road and Street Construction.

Tex., Jefferson—Marion County Commrs. Court, E. D. Lewis, County Judge, let contract to Cocke & Turner, Marshall, Tex., at \$40,000 for concrete bridge over Big Cypress Bayou on S. H. No. 8. (Lately noted.)

Tex., Lufkin—State Highway Dept., Austin, approved plans for 260-ft. bridge over Angelina River, on S. H. No. 35, between Angelina and Polk Counties; \$35,000; G. R. Abney, County Engr.

Tex., Rockdale—Milam County Commrs. Court, will receive bids soon to build Shekel steel bridge, over San Gabriel River, north of Rockdale.

West Virginia—State Road Comsn., Charleston, W. Va., let contracts to build 2 bridges as follows: Logan County, 5 block superstructure, to Oregonia Bridge Co., Lebanon, Ohio, \$9200; substructure, to Burris & Wilson, Kenova, W. Va., at \$3376.90; Wayne County, Echo Bridge, superstructure, to Standard Engineering & Construction Co., Toledo, \$8300; substructure to Burris & Wilson, Kenova, W. Va., at \$5712.20.

Canning and Packing Plants.

N. C., Kinston—Kinston Canning Co., capital \$100,000, inceptd. with L. J. Mewborne, Treas.; will establish canning plant.

Clayworking Plants.

Ga., Athens—Georgia Brick Co., H. H. Hinton, R. C. Wilson, will rebuild brick plant burned at loss of \$40,000.

Tenn., Knoxville—Cherokee Brick Co., organized with J. Albert Robbins, Pres.; E. Campbell, V. P.; E. C. Wright, Secy. and Treas.; has purchased site of 20 acres on Chestnut Ridge and will erect plant to manufacture rough texture brick, tapestry brick, etc.; daily capacity 40,000 brick; has purchased mch.; cost of plant \$250,000.

Tenn., Puryear—Dixie Brick & Tile Co. will increase capital to \$100,000.

Coal Mines and Coke Ovens.

Ky., Muhlenberg County—A. H. Luckey, Pres., Dixie Fuel Co., Nashville, Tenn., acquired two mines of the Phoenix Coal Co., combined capacity of mines 35 carloads daily; plans for development not completed.

Ky., Steff—Spring Lick Coal Co., Spring Lick, Ky. (lately noted inceptd., capital \$25,000) organized with Geo. W. Heheman, Pres.,

Prospect, Ky.; Carlos H. Given, Secy.-Treas. and Mgr., Spring Lick; development not determined. (See Machinery Wanted—Mining Machinery.)

Ky., Whitesburg—Fame Elkhorn Coal Co., capital \$100,000; inceptd. by J. L. Oldham and others.

Ky., Lexington—Ace Coal Co., capital \$25,000, inceptd. by T. F. McConnell and R. J. Raybold, both Lexington; A. B. Ewan, Whitesburg, Ky.

Mo., Huntsville—Mitchell & Lovell Coal Co., (lately noted inceptd., capital \$9000) organized with W. E. Mitchell, Prest.-Mgr.; Alfred Lovell, Treas.; will develop 35 acres coal land, daily output 200 tons.

Mo., St. Louis—Peerless Fuel Co., capital \$40,000, inceptd. by John Henderson, Carl Voigt, E. W. Brandenbruger.

Tenn., Pikeville—Pocahontas & Sewanee Coal Co. let contract to Williamson Construction Co., Pittsburgh, Pa. to construct tunnel and mine tipples with capacity to dump 18 pits cars.

Va., St. Charles—Blue Diamond Virginia Coal Co., Knoxville, Tenn.; H. C. Williams, Gen. Mgr., Middlesboro, Ky., has about 2500 acres under development, daily capacity 2000 tons. (Lately noted.)

W. Va., Bramwell—Banner Imboden Coal Co., capital \$15,000, inceptd. by J. E. Biggs, Jarius Collins and E. E. Hartcock.

W. Va., Clarksburg—Interstate Fuel Co. increased capital to \$100,000.

W. Va., Clarksburg—J. E. Long Coal Mining Co., increased capital to \$150,000.

W. Va., Mount Hope—Pemberton Fuel Co., increased capital to \$200,000.

W. Va., Mount Hope—Prince-Wick Coal Co., increased capital to \$300,000.

W. Va., Charleston—Unedda Coal Co., capital \$50,000, inceptd. by J. T. Lightner, Jos. Norton and E. B. Dyer.

W. Va., Powhatan—Tierney Mining Co., increased capital to \$450,000.

Cotton Compresses and Gins.

Ark., Forrest City—Farmers Gin & Coal Co., capital \$25,000, inceptd. by C. E. Turley and R. F. Cook; will construct brick gin at Jackson and Grant Sts.

Drainage Systems.

Ala., Fayette—Fayette and Lamar County Drainage Dist. No. 1 Commrs. For proposals details see Machinery Wanted—Clearing Right of Way.

Fla., Miami—Dade County Commrs. established Biscayne Prairie Drainage Dist. containing 9780 acres; construct canal extending from western boundary of district to Biscayne bay on the east, draining territory extending from bay almost to Hialeah.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Miss., Clarksdale—Clahoma County Drainage Comms. For proposal details see Machinery Wanted—Drainage.

Miss., Cleveland—Deeson Drainage Dist. of Bolivar County. For proposals details see Mch. Wanted—Drainage.

N. C., Bolton—Waccamaw Lumber Co., F. L. Finkenstadt, Prest., will construct 45 mi. of drainage canals, reclaiming about 21,000 acres land in Columbus County, N. C., adjoining Columbus County Drainage Dist. No. 2; estimated cost \$250,000; district just being organized and surveys started. (Lately noted.)

Electric Light and Power Plants

Ala., Haleyville—For full details see Water Works.

Fla., Jacksonville—City Comm. authorized extension of electric light line from old city limits to 26th St. and on 26th St. from Myrtle Ave. to Davis St.

Md., Baltimore—For full details see Land Developments.

Mo., Perryville—Mrs. D'Arline Holcomb, owner of electric light plant at Bowling Green, reported planning to purchase Union Electric Light and Power Plant at Perryville.

Mo., Rutledge—City voted to secure electric current from Edina Light Co. Address The Mayor.

Tex., Fort Worth—For full details see Water Works.

Tex., Jefferson—City Comms. let contract to Jefferson Ice & Light Co. for installing street lighting system in business section.

Tex., Perryton—For full details see Water Works.

Va., Appomattox—C. A. Hancock, Chrmn. of Comm. to rebuild burned light and power plant.

Fertilizer Factories.

S. C., Charleston—Wulbern Fertilizer Corp., capital \$150,000, inctpd. with E. N. Wulbern, Prest. and Treas.; Wm. E. Jones, Secy.

Flour, Feed and Meal Mills.

Ark., Pine Bluff—White Commission Co., Fourth Ave. and Georgia St. is expending about \$7000 in improvements to plant; will increase capacity of grain elevators; will construct poultry feed plant within main bldg.; will install automatic receiving and sacking scales.

Ky., Louisville—Gold Proof Milling Co. increased capital to \$250,000. (Lately noted to erect plant).

Tex., Houston—Standard Rice Co., increased capital from \$500,000 to \$1,500,000.

Foundry and Machine Plants.

N. C., Wilmington—Lingo City Machine Works, plans rebuilding portion of plant, lately noted burned.

Tex., Dallas—Southern Implement Supply Co., increased capital to \$150,000.

Va., Roanoke—Virginia Bridge & Iron Co. increased capital from \$1,500,000 to \$3,000,000.

Gas and Oil Enterprises.

Ark., Camden—Henry D. Whiten, representing Union Sulphur Co., of Louisiana, reported to develop oil land in Ouachita County, construct reservoir, etc.

Ark., Camden—Smackover Valley Oil Co., capital \$250,000, inctpd. with A. M. Sutton, Prest. and Gen. Mgr.; W. M. Worthen, Secy.; James Gould, Treas.

Fla., St. Petersburg—For full details see Land Developments.

La., Alexandria—City let contract to Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., for construction of natural gas distribution system; also let contract to Southern Carbon Co. to supply natural gas fields, distance of 105 mi. from Ouachita gas fields.

Md., Baltimore—Consolidated Gas & Electric Co., Lexington Bldg., will expend \$25,000 in improvements to Front St. distributing station. (Lately noted).

Md., Baltimore—For full details see Land Developments.

Md., Baltimore—Royalty Corporation of Maryland, Stock Exchange Bldg inctpd. by Carl DeSeal, Franklin W. Levering, La Baron Adams.

N. C., Raleigh—Carolina Power & Light Co. will construct additional gas mains.

Okla., Duncan—Rock Island Refining Co., C. H. Haskell of New York, Frank Kell and J. A. Kemp of Wichita Falls, Tex. considering construction of 50 mi. pipe line from Hewitt field in Carter county to refinery at Duncan.

Okla., Duncan—Magnolia Petroleum Co. has made surveys for construction of 30 mi. pipe line from Duncan to Cement.

Okla., Enid—Duz Products Co., capital \$25,000, inctpd. by L. F. Messman, J. J. Nelson, K. W. Westlake.

Okla., Okmulgee—Indianahoma Refining Co. will construct 25 mi. of pipe line from refining plant at Okmulgee to Hughes county oil field.

Okla., Okmulgee—Empire Pipe Line Co. is making preliminary surveys for extending

pipe line into fields of Southern Oklahoma; distance of 165 mi.

Okla., Perry—E. A. Hutcheson, Mgr. of Garber Refinery, reported to construct refinery.

Okla., Tulsa—Oklahoma Pipe Line Co. will construct 30 mi. line into Hughes county.

Okla., Tulsa—Sheldon Texas Oil Co., capital \$12,000, inctpd. by C. M. Sheldon, W. W. Sheldon, O. H. Sheldon

Okla., Tulsa—I. X. L. Drilling Co., capital \$25,000, inctpd. by Stanley D. Campbell, Ray C. Fellows, Albert H. Bell.

S. C., Pelzer—Willmont Oil Mills, John A. Hudgens, Prest., will vote Jan. 2 on increase of capital.

Tex., Houston—Equitable Consolidated Oil Co., capital \$10,000, inctpd. by J. T. Judd, S. C. Judd, N. S. Schmitz.

Tex., Houston—Oil Fields Royalty Corp., capital \$100,000, inctpd. by C. A. Bryan, Jno. R. Atkinson, L. L. Bryan.

Tex., Houston—Humble Oil & Refining Co., reported to increase capital stock from \$25,000,000 to \$43,750,000.

Texas—Mission Oil Co. of Kansas City, Mo. will construct gas line in Texas Panhandle connecting gas fields with Amarillo for industrial purposes.

W. Va., Huntington—South Point Oil Co., lately inctpd. with \$350,000 capital, inctpd. with Lem Hall Lipsey, 1018 1st National Bank will construct 13 mi. of pipe lines. (See Mch. Wanted—Pipe, Pumps, etc.; Rigs (Drilling).)

Ice and Cold-Storage Plants.

Ky., Louisville—Bluegrass Refrigerating Co., inctpd. by R. J. Berthoff, F. L. Cook and C. H. Kellner.

Md., Baltimore—Baltimore Ice Mfg. Co., corner Lewis and Lexington Sts., capital \$250,000, inctpd. by Raymond H. Boxman, 1711 Barclay St., William C. Frederick and Herbert W. Anderson.

S. C., Spartanburg—Hygeia Ice & Fuel Co., Charles St., has begun replacing system for mfr. of ice; R. F. Lindsay, in charge of installation.

Tenn., Ripley—For full details see Sewer Construction.

Tex., El Paso—Spears & Miller, 2300 Texas St., let contract to J. E. Morgan to erect concrete extension to plant, approx. cost \$25,000.

Tex., Fort Worth—W. P. Gilbert and J. J. Morris, contemplate erecting \$20,000 ice plant, installing \$45,000 equipment, at Hemphill Heights addition.

OPPORTUNITIES FOR NEW BUSINESS

THROUGH THE

DAILY BULLETIN

Manufacturers of Machinery and Equipment, Dealers in Railroad and Contractors' Supplies, as well as Architects, Contractors and Builders, find it very profitable to follow up the advance news furnished through our DAILY BULLETIN EVERY BUSINESS DAY IN THE YEAR. It is an authoritative, prompt source of information concerning every industrial and railroad undertaking of any consequence, and likewise all important building operations and municipal improvements in the whole South. The opportunity of getting in correspondence with firms that are in the market is afforded by a daily perusal of its columns.

MANUFACTURERS RECORD

BALTIMORE, MD.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., San Antonio—City Ice & Fuel Co., increased capital from \$112,500 to \$250,000.

W. Va., Wheeling—W. M. B. Sine and G. A. Williams, Clarksburg, W. Va., and others, purchased plant of Wheeling Ice & Storage Co.; will remodel; mfrs. raw water ice.

Iron and Steel Plants.

Ky., Ashland—Ashland Steel Co., Thomas M. Adams, Prest., increased capital from \$100,000 to \$1,100,000.

Land Developments.

Ark., Little Rock—Fidelity Farms Trust Co. of Little Rock, has acquired 1640 acres near Wilder Spur; will divide into lots and colonize.

D. C., Washington—Smallwood Realty Co., capital \$25,000, inctpd. by Geo. T. Smallwood, John E. Garvey.

Fla., Daytona—William N. Flinn and associates of Camden, N. J., reported as purchasing 1000 acres of land a few miles south of Daytona, including town of Allandale and will develop; will install street paving, water works, erect dwellings and other improvements; reported that Charles L. Thompson, of Camden, N. J., will manage Daytona office.

Fla., Fort Myers—Royal Palm Estates, capital \$30,000, inctpd. with C. Q. Cteewart, Prest.; W. L. Waterman, V. P.; George Leavitt, Secy. and Treas.

Fla., Jacksonville—Merrill-Stevens Land Co., capital \$10,000, inctpd. with J. E. Merrill, Prest.; K. A. Merrill, V. P.; John T. Manier, Secy. and Treas.

Fla., Key West—City will improve City Park on Division St., erect Key West Hospital, extend street paving; will vote soon on \$25,000 park bonds, \$65,000 hospital bonds; \$25,000 bonds for streets. Address The Mayor.

Fla., Miami—Friendly Realty Co., capital \$200,000, inctpd. with H. Dale Miller, Prest.; Jean R. Miller, V. P.; Samuel J. Barco, Secy. and Treas.

Fla., Pensacola—Avant-Pace Co., capital \$300,000, inctpd. with J. A. Avant, Prest.; J. C. Price, V. P.; Ashley D. Pace, Secy.-Treas.

Fla., St. Augustine—Dr. Andrew Anderson interested in development of Ponce de Leon Park; will erect bronze statue of Ponce de Leon.

Fla., St. Petersburg—C. Perry Snell will expend \$150,000 in developing tract of land between Locust and First Sts. and 21st and 30th Aves. for subdivision; has let contract to W. H. Phell for dredging in Coffee Pot Bayou, dredge will fill in waterfront lots about 3 ft. high behind a sea wall; will construct canal distance of nearly ½ ml. from Coffee Pot Bayou to Smack's Bayou, canal will be tidewater and about 30 ft. wide; will install water, gas, storm and sanitary sewers, pavements, sidewalks, etc.; will probably require one yr. for development.

Fla., St. Petersburg—North St. Petersburg Land Co., inctpd. with E. B. Wilson, Prest.; W. F. Smith, V. P.; J. A. Townsend, Secy.; will expend \$250,000 in developing 1200 acres of land extending from Ninth St. north to Smack's bayou for residential section; J. A. Mortland, Engr.

La., New Orleans—Col. R. E. E. DeMont-lusin has acquired about 30,000 acre tract; will develop portion for subdivisional erect clubhouse, etc.

Md., Baltimore—Stoneleigh Corp., Irvin E. Butler, Prest., 620 Cator Ave. has purchased and will develop 114 acres of land at York Rd. and Regester Ave. for subdivision; will

install water, sewers, electricity, gas, construct streets, etc.

Md., Baltimore—Cityco Realty Co., 2 E. Lexington St., will develop 170 acres for subdivision; will construct streets; install sewers and erect cottages.

Md., Baltimore—Oakford Realty Co., 344 Equitable Bldg., capital \$50,000, inctpd. by E. ginald H. Glese, Harry Safranek, Emanuel Gorhne.

Mo., Kansas City—Sheloh Investment Co., inctpd. by I. Hurwitz, H. Glass, C. Nachtigal.

Mo., Kansas City—Phillips-Morgan Estates Corp., capital \$100,000, inctpd. by L. L. Morgan, W. E. Orndorff, K. B. Uhl.

Mo., St. Louis—Parkview Realty & Investment Co., capital \$21,000, inctpd. by W. A. Hays, J. H. Grand, H. J. Cohen.

Mo., St. Louis—Marvel Realty Co., inctpd. by P. J. Kelleher, J. J. Warnick, Gus Koenig.

Mo., St. Louis—Crest Investment Co., capital \$5000, inctpd. by J. A. Sheehan, W. F. Sheenan, Blanche S. Holloran.

Mo., St. Louis—Star Realty Co., capital \$60,000, inctpd. by A. A. Sacks, H. J. Sacks, B. J. Sacks.

N. C., Angier—Angier Investment Co., capital \$5000, inctpd. by O. S. Young, H. C. Strickland, Franklin T. Dupree Angier.

S. C., Charleston—Lee L. Power & Co., capital \$25,000, inctpd. with Lee L. Powers, Prest. and Treas.; Hayward Powers, V. P. and Secy.

S. C., Columbia—Elliott & Davis, capital \$10,000, inctpd. with Stephen Elliott, Prest.; Claude P. Davis, V. P. and Secy.

S. C., Greenville—Greenville Nursery Co., Chas. O. Allen of Greenville and L. S. Smith of Greer has purchased tract of land and will enlarge nursery.

Tenn., Memphis—J. L. and H. L. Nessley have acquired 16 acres and will develop for subdivision.

Tex., Fort Worth—Public Recreation Board, Marvin Evans, Chmn. has purchased 96 acres of land and will construct municipal golf course; will expend about \$25,000 in improvements; will erect clubhouse, etc.

Tex., Galveston—American National Realty Co., increased capital to \$50,000.

Va., Norfolk—Tomlinson Holding Corp., capital \$250,000, inctpd. with A. T. Tomlinson, Prest., Phila., Pa.; C. L. Roberts, Secy.

Va., Norfolk—Gormat Investment Corp., capital \$300,000, inctpd. with E. C. Mathews, Prest.; W. W. Gordon, Secy.

W. Va., Charleston—Shonk Land Co., Herbert B. Shonk, Prest., will increase capital from \$650,000 to \$1,700,000.

Lumber Manufacturing.

Ark., Fort Smith—Mansfield Lumber Co., increased capital to \$100,000.

Ark., Pine Bluff—Pine Bluff Lumber Co., increased capital to \$100,000.

Fla., Eustis—Eustis Lumber Co., capital \$10,000, inctpd. with W. H. Arnold, Prest.; Martha S. Bailes, Secy.

Fla., Volusia—Voice Cypress Co., capital \$125,000, inctpd. with C. H. Lutz, Prest.; T. E. Murree, Secy.

Ky., Ashland—Rice-Emerick Lumber Co., capital \$100,000, inctpd. by W. M. Salisbury, Ashland, Ky.; C. L. Rice, Charleston, W. Va. and John J. Emerick, Catlettsburg, Ky.

Ky., Paducah—Faust Brothers Lumber Co., increased capital to \$200,000.

La., Coushatta—Gulf State & Lumber Co., plans installing new equipment, individual motor driven.

Md., Baltimore—Kidd & Buckingham Lumber Co., 1400 Ridgely St., increased capital to \$275,000.

N. C., Hickory—Hutton & Bourbonnais Co., increased capital from \$300,000 to \$1,000,000.

N. C., High Point—Snow Lumber Co., increased capital to \$500,000.

S. C., Batesville—Brabham Lumber Co., increased capital to \$10,000.

Tenn., Knoxville—Cockrum Lumber Co., D. G. Cockrum, Secy., has plant and equipment purchased including, planer, boilers and engines. (Lately noted increase to \$125,000).

Tex., Austin—Haberlin-Reid Lumber Co., capital \$15,000, inctpd. by W. S. Thornton, R. H. Haberlin and W. R. Reid.

Tex., Hull—Doucette Lumber Co., increased capital to \$40,000.

Tex., Houston—South Texas Lumber Co., increased capital from \$400,000 to \$1,400,000.

Tex., Houston—Harris County Lumber Co., inctpd. by R. D. Gambrill, J. H. Tucker and Junius Ballard.

Tex., Houston—Mission Lumber Co., increased capital to \$100,000.

Tex., San Antonio—Gene Brisco Lumber Co., capital \$20,000, inctpd. by Gene Brisco and others.

Metal-Working Plants.

Ky., Bowling Green—Metallic Casket Co., increased capital to \$60,000.

La., New Orleans—Carburetor—Duplantier Carburetor Co., Inc., capital \$200,000, inctpd. by Roy Chinn, B. C. Lawler and Curtis N. B. Duplantier; mfrs. carburetors.

Mo., Kansas City—Nichols Wire & Sheet Co., capital \$750,000, inctpd. with F. R. Nichols, Prest. (Supersedes recent item).

Mo., Kansas City—Granitone Products Co., capital \$50,000, inctpd. by J. M. Webster, J. J. Holmes, W. R. Moore.

Mo., Springfield—Ozark Incubator Co. For full details see Woodworking Plants.

Mo., St. Louis—Modern Appliance Co., capital \$10,000, inctpd. by G. W. Rupp, P. A. Rice, Helen S. Rupp.

Mo., St. Louis—Grace Sign Co. let contract for the erection of plant on Sidney St., mfrs. steel road signs.

Mo., St. Louis—Stout Sign Co. let contract to W. C. Harting to erect plant at 2523 Sullivan Ave. for mfrs. of embossed metal signs; Helfensteller, Hirsch & Watson, Archts.

N. C., Charlotte—Terrell Machine Co., Edgar A. Terrell, Prest., increased capital to \$100,000.

W. Va., Charleston—Charleston Cornice & Roofing Co., capital \$10,000, inctpd. by D. H. Hisey, Roy H. Day and T. R. Shelton.

Mining.

Ky., Louisville—Ohio River Sand Co., Thomas J. Duffey, increased capital to \$360,000.

La., Monroe—Monroe Sand & Gravel Co., capital \$25,000, inctpd. with T. B. Stephenson, Prest.; R. O. Randle, Secy.-Treas.

Md., Dunkirk—Dashiell Mining & Refining Co. has under development diatomaceous earth deposits; plant owned and designed by B. J. Dashiell, Consltg. Engr., Baltimore, Md.; contemplated capacity car-load daily when completed with conveyor system, yet to be installed.

Mo., Joplin—Ore Drilling—D. C. Wise and others have leased 320 tract, will develop.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tenn., Chattanooga—Rail & River Mining Co., capital \$175,000, inceptd. by A. L. Jacobs, R. Hoppe and P. J. Hays.

Miscellaneous Construction.

Fla., St. Augustine—Monument—For full details see Land Developments.

Fla., St. Petersburg—Dredging—For full details see Land Developments.

Fla., Tampa—Seawall, etc.—Hillsborough County Comms., Charles T. Friend, Chrmn. have \$250,000 available from bond issue for construction of sea wall and fill on Bayshore Blvd. connecting with present sea wall at city limits and extending to Ballast Point.

La., New Orleans—Wharf—Port Comms. opened bids for re-construction of Robins St. wharf; John Riess, lowest bidder at \$196,634. (Bids lately noted.)

La., New Orleans—Levee—Orleans Levee Board let contract to Hampton Reynolds, Maison Blanche Bldg. at \$26,801 to construct Otis levee, containing 28,500 cu. yds. earth.

Tex., Waco—Incinerator—City Comms. let contract to Superior Garbage & Incinerator Co., Dallas, Tex. at \$18,000 to construct incinerating plant; capacity 20 tons per 12 hours.

Va., Norfolk—City let contract to A. M. Crain & Co., 53 W. Jackson Blvd., Chicago, Ill., at \$133,000 to install an Ellis drier at municipal grain elevator; C. M. Ashburner, City Mgr.

Miscellaneous Enterprises.

Ala., Huntsville—Hatchery—William H. Martin and J. H. Ware will establish hatchery, capacity of incubator 10,369 eggs.

Ark., Fort Smith—Atkinson-Williams Hardware Co., increased capital to \$500,000.

Ark., Texarkana—Burhman-Pharr Hardware Co., F. E. Pharr, Prest., increased capital to \$500,000.

Fla., Jacksonville—Printing, etc.—Florida Baptist State Board of Missions, will erect 40x100-ft. building, containing printing plant, etc.

Fla., Jacksonville—Tallest Hotel Co., capital \$100,000, inceptd. with J. L. Tallest, Prest.; J. H. Orr, Treas.

Fla., Miami—National Highway Charts Assn., capital \$100,000, inceptd. by A. L. Thompson, D. Troy Halls and Carl W. Hawkins.

Fla., Panama City—Bay County Beacon-Tribune, capital \$10,000, inceptd. with Alfred Tyler, Prest.; Herbert C. Riley, Secy.-Treas.

Ga., Swainsboro—Publishing—Swainsboro Progress, will be printed in Sandersville, Ga.; later plans building local plant; Guy Alford, in charge.

Ky., Louisville—Pioneer Dry Cleaning & Dyeing Co., capital \$25,000, inceptd. by C. Jefferson, W. Bauer and W. Gambert.

Ky., Louisville—Plumbers Supplies—Lalb Co., increased capital from \$150,000 to \$900,000.

Ga., Atlanta—Westinghouse Electric & Mfg Co. has leased 6 story building to be erected at Jones Ave. and Marietta St., 100x150-ft. site; building to be used for office, warehouse and service station; construction begun.

Ky., Whitesburg—Publishing—Letcher County Leader Publishing Co., inceptd. by Robert Blair, Sr., Robert Blair, Jr., and Stephen Blair.

Md., Baltimore—Contracting—T. D. Calborne Co., Inc., 516 Garrett Bldg., capital \$25,000, inceptd. by August Mencken, Henry M. Gittings and Charles B. Hoffman.

Mo., Kansas City—Hulet Bros. Storage & Moving Co., capital \$100,000, inceptd. by H. J. Hulet, J. G. Hulet, H. F. Reilly.

Mo., Springfield—McGregor-Noe Hardware Co., increased capital from \$60,000 to \$840,000.

Mo., St. Louis—Progress Pictures Corp., capital \$20,000, inceptd. by Thomas Leonard, Alfreda Goldman, John Olsen.

Mo., St. Louis—Enterprise Construction Co., capital \$10,000, inceptd. by M. A. Steele, W. R. Creelius, W. C. E. Becker.

N. C., Charlotte—American Dry Cleaning Co., 1406 S. Tryon St., will erect 21x75-ft. addition, double plant's capacity.

N. C., Greensboro—Greensboro Warehouse & Storage Co., increased capital to \$1,000,000.

N. C., Red Springs—Farmers Hardware Co., established by John F. McLean; handle builders' supplies. (See Mch. Wanted—Builders' Supplies.)

N. C., Statesville—Connor, Bryant Hardware Co., changed name from Harness, Vehicle & Supply Co., increased capital to \$50,000.

N. C., Stovall—Construction—Spraggins Grading Co., inceptd. by T. G. Spraggins, L. A. and Harold Pittman.

Okla., Oklahoma City—Nokol Automatic Heating Co., capital \$25,000, inceptd. by R. A. Brown and F. B. Owen, Oklahoma City; F. J. Store, Amarillo, Tex.

Okla., Pryor—Potato Storage—Pryor Commercial Club contemplates erecting sweet potato storage buildings.

Tenn., Knoxville—Amusements—H. T. Lucas, Mgr., Chihlowee Park will expend \$10,000 on park improvements, including new roller coaster, dancing hall, etc.; Miller & Baker, Designers, Chicago, Ill.

Tex., Fort Stockton—Bar L-T Cattle Co., capital \$10,000, inceptd. by W. E. Loose, L. B. and J. F. McKenzie.

Tex., Fort Worth—Fire Equipment—For full details see Water Works.

Tex., Houston—Houston Harbor Transportation Co., capital \$50,000, inceptd. by J. D. Latta, A. Alexander and J. W. Garrow.

Tex., San Antonio—Abattoir—Kothman Brothers, will erect abattoir on S. Colorado St.

Va., Norfolk—Glitt's Transfer Co., capital \$10,000, inceptd. with Frank Gittleton, Prest., Norfolk; Louis Gittleton, Secy., Portsmouth.

Miscellaneous Factories.

Ala., Tuscaloosa—Perry Creamery Co., J. I. Perry, Prest., will install milk condensing plant, homogenizer, and other equipment at creamery.

Fla., Hildreth—Hildreth Naval Stores Co., capital \$6000, inceptd. with S. Mitchum, Prest.; J. M. Haman, V. P.

Fla., Live Oak—Amboy Naval Stores Co., capital \$6000, inceptd. with J. M. Haman, Prest.; D. R. Haman, V. P.; H. G. Zorn, Secy. and Treas.

Fla., Miami—Miami Milk Co., capital \$25,000, inceptd. with C. P. Fripp, Prest.; W. C. Eberline, V. P.; J. C. Pereno, Secy.

Ky., Ashland—Clay-Gunnell Shoe Co., Geo. F. Gunnell, Prest., 107 W. 26th St., Catlettsburg, will remove plant to Ashland; will construct 4 story building; will increase capital to \$400,000.

Ky., Louisville—Solger Confectionery, capital \$15,000, inceptd. by Wm. T. Solger, Wm. J. Laufer.

La., Monroe—Monroe Louisiana Carbon Co., main office DeKald and Zepp Sts., St. Louis, Mo., Edmund C. Beckman, Prest.; will construct one unit consisting of 30 houses, cost \$100,000; mill construction; gally output

5000 lbs. carbon black; will install electric motors, gas engines, elevators, conveyors, packers, etc., cost about \$10,000; construction by others; mch. purchased; Chauncey Matlock, Consult. Engr., 949 Broadway, New York. (Lately noted.)

La., New Orleans—Sam Stone, Jr., Archt., and Grover C. Stone, Associate, 714 Union St., opened bids for construction of additions and making alterations to plant of Fulton Bag Co., at Front and Gaienne Sts.; Gervais F. Favrot, lowest bidder at \$23,990; bids for electric works, sprinkler system and paving will be let later; plans call for construction of 1-story; 65x95 ft.; steel frame dryer building and 1-story, 50x85 ft. masonry bag shed and alterations and repairs to existing building, etc. (Lately noted.)

La., New Orleans—J. V. and R. T. Burkes, Carondelet Bldg. has contract for construction of group of buildings for the Presto-Lite Co., plans call for erection of 10 buildings; frame, concrete and steel; cost approx. \$55,000; Union Carbide Co., of New York, parent company.

Md., Baltimore—Pante—J. Schoenman, Inc., 412 Redwood St., increased capital to about \$2,000,000.

Md., Laurel—Window Shades—Lapsley & Bro., main plant, Hoboken, N. J., local office 30 S. Hanover St., Baltimore, has acquired 40,000 sq. ft. of space in plant formerly occupied by Mount Vernon Woodberry Mills and will convert into factory to mfr. window shade cloth; will install all new mch., at cost of about \$100,000; will have an annual capacity of more than 2,000,000 yds. of material.

Miss., Moss Point—Southern Paper Co., J. L. Dantzer, Prest., will erect paper and pulp mill with daily capacity of 60 tons paper and 60 tons pulp; brick and concrete; address building proposals to Geo. F. Hardy, Engr., 309 Broadway, New York; will install equipment to increase capacity from 40 to 100 tons per day of pulp and paper. Lately noted. (See Mch. Wanted—Pulp and Paper Equipment.)

Miss., Vicksburg—Biedenharn Candy Co., increased capital to \$250,000.

Mo., Springfield—Bakery—W. H. Durland and Louis Bernhardt organizing company to establish bakery.

Mo., St. Joseph—St. Joseph Mfg. Co., capital \$5000, inceptd. by C. M. Cilne, G. F. Stiller, E. J. Kearby.

Mo., St. Louis—Clothing—Newmark Corporation of Missouri, capital \$10,000, inceptd. by J. T. Newark, Morris Cohen, C. K. Rowland.

Mo., St. Louis—Gassner Clothing Co., capital \$12,000, inceptd. by E. M. Gassner, T. E. Gassner, A. Spetner.

Mo., St. Louis—Leather—T. M. Fitzgerald Co., capital \$10,000, inceptd. by T. M. Fitzgerald, H. T. Tankersley, G. J. Eberle, Jr.

N. C., Gastonia—Elektrik Bake Shop, capital \$15,000, inceptd. by A. P. Miller, J. A. Gaston, A. H. Howell.

Okla., Chickasaw—J. W. Comer, Secy. Chamber of Commerce reports plans are being discussed to establish glass factory and corrugated pasteboard box plant.

S. C., St. George—Atlantic Turpentine Co., capital \$10,000, inceptd. with H. H. Gross, Prest.; W. C. Wolfe, V. P.

Tenn., Memphis—Dixie Margarine Co., capital \$300,000, inceptd. by J. P. Waldrup, R. M. Stewart, J. T. Buntin, to establish plant to mfr. margarine from cocoanut oil, sweet milk and peanut oil; will install mch., costing about \$20,000.

Tenn., Union City—Brown Shoe Co. of St.

Louis, Mo., has site at Cheatham and Gibbs St. and will erect shoe factory; 435x240 ft.; contract let; will also construct club house, etc.; temporary site has been secured in the Bransford Bldg., which will be remodeled, for present plant. (Lately noted).

Tex., El Paso—Overalls—Hicks-Hayward Co. increased capital to \$60,000.

W. Va., Huntington—Enterprise Chemical Co., capital \$100,000, inceptd. by A. J. King, Joe L. Wilson, G. D. Miller.

W. Va., Wheeling—United States Lens Corporation, inceptd. by John C. Palmer, Joseph R. Curl, Jr., William F. Keefer, and others.

Motor Cars, Garages, Tires, Etc.

Ark., Imboden—Garage—Bowers Motor Co. will erect garage on Walnut St.

Fla., DeLand—Triangle Garage Co., capital \$25,000, inceptd. with Tom B. Stewart, Pres.; J. M. Griggs, Secy.

Fla., Miami—Automobile Specialties—Waterproof Hood Corp., capital \$200,000, inceptd. with M. J. Noble, Pres.; Maj. Anderson, Secy.; mfrs. anti-leak guards for automobile hood, etc.

Fla., Orlando—Orlando Jordan Co., capital \$10,000, inceptd. with C. C. Corpening, Pres.; Gordon Doss, Secy.—Treas.

Ky., Ashland—Ashland-Paige Motor Co., incorporated by G. L. Handley, B. R. Cisco and Judge A. W. Mann; will erect brick garage at corner of 20th St. and Carter Ave.

Miss., Hattiesburg—Filling Station, etc.—American Oil Co., R. W. Dunn, Mgr. let contract to Bob Hendrix at \$10,000 to erect gasoline and oil filling station corner Batson and Main Sts., brick and white stucco construction, red Spanish tile roof; purchased 70x100-ft. site; construction begun.

Mo., Clayton—MacCarthy Pardue Co., capital \$12,000, inceptd. by J. D. MacCarthy, T. M. Pardue, H. K. MacCarthy.

Mo., Odessa—O'Bryan Motor Co., capital \$20,000, inceptd. by C. K. Norfleet, Ben Turhoff, G. M. Norfleet.

Mo., St. Louis—Lambert Graves Motor Co., capital \$30,000, inceptd. by S. B. Lambert, C. E. Graves, A. W. Lambert.

N. C., Asheville—Motor Co., of Asheville, capital \$75,000, inceptd. by James H. Calne, William L. Black and Ernest W. Alexander.

N. C., Charlotte—D. D. Heath Motor Co., capital \$50,000, inceptd. by B. D. F. J. and Shelton Heath.

N. C., Greensboro—Garage—Kirkman & Cobb, capital \$50,000, inceptd. by Benjamin F. Cobb, Lucius I. & Thomas A. Glascock.

N. C., Leaksville—Motor Sales & Truck Co., inceptd. by W. H. Smith, Leaksville; M. B. Helner and E. E. Emerson, Spray, N. C.

Okla., Oklahoma City—Cole Sales Co., capital \$15,000, inceptd. by Jos. J. Cole, Robert M. Browning and F. L. Chiles.

Tex., El Paso—Garage—George Baudette, reported to erect 50x120-ft. garage, at Franklin and Santa Fe Sts.; brick and concrete construction.

Tex., Galveston—Goodman Motor Co., capital \$10,000, inceptd. by H. B. and G. Goodman.

Tex., El Paso—Tri-State Motor Co., capital \$300,000, inceptd. by J. W. Kirkpatrick, M. P. Moore and C. L. Pelham.

Tex., Houston—Worsham Brothers Motor Co., capital \$100,000, inceptd. by J. M., J. L. and Ben Worsham.

Tex., San Antonio—Garage—N. O. Green will erect garage on Avenue C, tile, brick and concrete construction; cost \$12,500.

Va., Radford—Radford Sales Corp. (lately noted chartered, capital \$50,000) R. R. Co.

penhaver, Mgr., has 3 story building, will probably install repair shop equipment later.

W. Va., Huntington—Nash Motor Sales Co., capital \$50,000, inceptd. by H. G. Nash, C. V. Rader and W. Roy Campbell.

W. Va., Weston—Automobiles—Hood-Dent Co., capital \$50,000, inceptd. by George E. White, J. Cline Hood and Harold F. Dent.

Railways.

Okla., Okmulgee—Oklahoma Northern Railroad, J. J. Schock, general manager, will it is stated soon begin construction of an extension from Coalton, Okla., to Checotah, Okla., about 25 mi. to connect with the Missouri, Kansas & Texas Railway.

Railway Shops, Terminals, Round-houses, Etc.

Md., Hagerstown—Pennsylvania R. R. Co., A. C. Shand, Chief Engr., Philadelphia, Pa., let contract to J. Buchanan Co., Philadelphia, Pa., to electrify engine terminals.

Mo., St. Louis—Missouri, Kansas & Texas Ry., F. Ringer, Chief Engr., reported to expend \$8,000,000 for repair work, erection of terminals and shops also purchase of new equipment.

Road and Street Construction.

Ala., Anniston—For proposal details see Mch. Wanted—Road Construction.

Ala., Birmingham—City and Jefferson County Commrs. plan paving 3 mi. Birmingham-Pratt City road, from end of County paving on Bankhead Highway at city limits of Pratt City to East Thomas, concrete base, \$100,680; also complete loop of Pratt-Ensley road through central section of Pratt City; \$32,120; will let contract soon for Pratt-Ensley main road.

Ala., Union Springs—State Highway Dept., Montgomery, Ala., let contract to D. R. Cook & Co., Montgomery and Selma, Ala., at \$326,228 for 18.6 mi. 16-ft. gravel road between Union Springs and Montgomery, F. A. Proj. Nos. 1 and 68. (Lately noted.)

Fla., Bartow—City plans paving improvements; E. V. Camp and Associates, Engrs., Moreland and De Kalb Aves., Atlanta, Ga.

Fla., Daytona—For full details see Land Developments.

Fla., De Land—Volusia County, New Smyrna Road and Bridge Dist., will build about 63 mi. highway; voted \$600,000 bonds. (Lately noted.)

Fla., Pensacola—State Highway Dept., Tallahassee, Fla., let contract to C. A. Fulghum, Pensacola, at \$270,264 for 10 mi. road from Pensacola to Roberts, on Pensacola-Flomaton road, Escambia County, Proj. 34. (Lately noted.)

Fla., St. Petersburg—For full details see Land Developments.

Fla., Selma—For proposal details see Mch. Wanted—Paving.

Fla., West Palm Beach—City Comsn., may let contracts soon to pave, widen or repair following: 15th Ave. from Poinsettia to railroad, Datura from Rose to Sapodilla, Okeechobee road from railroad to lake, Iris St. from Poinsettia to Sapodilla, 14th Ave. from Poinsettia to railroad, Gardenia St. from Olive to railroad, 11th, 21st, McKinley Aves., Poinsettia Blvd., etc.

Fla., West Palm Beach—For proposal details see Mch. Wanted—Road Construction.

Fla., Zephyrhills—For proposal details see Mch. Wanted—Paving and Water Works.

Ga., Jackson—Butts County will improve highways; \$300,000 available. Address County Commrs.

Ky., Winchester—Clark County will improve roads; has voted \$92,000 bonds. Address County Commrs.

La., Covington—Saint Tammany Parish Police Jury plans expending \$32,000 to hard surface and improve Slidell-Salt Bayou road.

La., Monroe—For proposal details see Mch. Wanted—Paving and Sewer Construction.

Md., Baltimore—For full details see Land Developments.

Missouri—State Highway Dept., Jefferson City, Mo., let contract for 13 sections of roads as follows: Franklin County 6.638 mi., Sections 66 and 67, to Frazier Davis, St. Louis, Mo., at \$47,400; Miller County, 4.991 mi. Sec. 56, to Fogleman, Thompson, Eugene, Mo., at \$19,749.08; Miller County, 4.078 mi. Sec. 57, to Fogleman, Thompson, at \$14,443.54; St. Charles County, 7.555 mi. Sections 68, 69 and 71, to S. M. Timberlake, Indianapolis, Ind., at \$319,019.19; Caldwell County, 9.868 mi., Sections 12 and 13, to Harrison Engineering & Construction Co., Wichita, Kan., at \$425,298.65; Butler County, 10.47 mi., Projects 204A and B, to Robertson & Taylor, Poplar Bluff, Mo., at \$329,000; Jefferson County, 8.144 mi., Sections 2 and 3, to W. J. Knorpp and Jas. Richardson, De Soto, Mo., at \$47,362.66. (Lately noted.)

Miss., Vicksburg—J. J. Hayes, Mayor, received bids for paving 45,467 sq. yds. streets, 19,634 lin. ft. curbing, 8144 lin. ft. headers, Merrill Road & Improvement Co., Chattanooga, Tenn., low bidder at \$174,412.16 for brick on 6-in. concrete base, and at \$157,770.69 on 4-in. concrete base, at \$164,473.72 for asphalt on 6-in. and at \$153,220.58 on 4-in. base; Frank M. Garvey, Engr.

Mo., Columbia—State Highway Dept., Jefferson City, Mo., let contract to F. A. Stoner Construction Co., Chamolis, Mo., at \$23,785.27, to grade and construct drainage structures on 6½ mi. of Jefferson City-Columbia road south of Ashland.

Mo., Carthage—City contemplates paving Howard Ave. from Chestnut St. to South Grand Ave. Address The Mayor.

Miss., Lucedale—City contemplates placing gravel on Main St. Address The Mayor.

Missouri—State Highway Dept., Jefferson City, Mo., let contracts for 2 roads as follows: Callaway County, 1.004 mi. road east and west of Fulton, gravel pavement, F. A. Proj. No. 218, to Albert G. Brown, Jefferson City, at \$12,467.21; Barton County, 1.541 mi. road from Kansas line to Minden Mines, F. A. Proj. No. 210, Highway Stone Co., Webb City, Mo., at \$11,848.89. (Lately noted.)

Missouri—State Highway Dept., Jefferson City, Mo., let contracts for 3 roads as follows: Atchison County, 4.864 mi. road from Fairfax toward Tarkio, to W. R. Larson, Sioux Falls, S. D., at \$70,318.46; Clinton County, 1.6 mi. road from Grayson to Clay County line, to J. O. Peterson & Co., Kansas City at \$12,612.47; and 4.016 mi. from Grayson to Clay County line, at \$23,954.14. (Lately noted.)

Missouri—State Highway Dept., Jefferson City, Mo., will build 51 roads. For proposal details see Mch. Wanted—Road Construction.

Mo., Danville—State Highway Dept., Jefferson City, Mo., let contract to Doehle & Kollmeyer, Jefferson City, at \$41,652.57 to gravel 4.062 mi. 12-ft. road in Montgomery County, Proj. 141.

N. C., Asheville—E. W. Grove plans expending several hundred thousand dollars to lay street parallel with Cox St., extend Phillip St., etc. in Cox Estate.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

N. C., New Bern—State Highway Comsn., Raleigh, N. C., let contract at \$300,000 for 10 mi. hard surfaced road from Fort Barnwell to Jasper. (Lately noted.)

Tenn., Chattanooga—City plans widening and extending McCaillie Ave. to Broad St. via 8th; also plans improving following streets: Mulberry, Beech, Orchard Knob, 27th, 16th, Watauga, 17th, Madison, Anderson. Address The Mayor.

Tenn., Gallatin—State Highway Dept., Nashville, Tenn., let contract to Moore Bros. Carr Co., 220 Capitol Blvd., Nashville, at \$136,781, for 5.75 mi. road between Gallatin and point 1 mi. east of Avondale, rock asphalt surface, hand placed course stone base, Sumner County, F. A. Proj. No. 63-A. (Lately noted.)

Tenn., Knoxville—State Highway Dept., Nashville, Tenn., let contract to R. L. Peters & Co., Holston National Bank Bldg., Knoxville, at \$85,345 for 2.85 mi. concrete road between city limits of Knoxville and point 1 1/3 mi. west of Bearden. (Lately noted.)

Tenn., Ripley—For full details see Sewer Construction.

Tex., Austin—State Highway Dept., Austin, approved plans for 5.6 mi. S. H. No. 3-A, Travis County, from Jones Crossing to Bastrop County line; \$64,052; O. Leonard, County Engr.

Tex., Beeville—City Comsn., let contract to Smith Bros., Crockett, Tex., to hard surface 2 blocks on Washington St. from railroad to W. S. Geffert's residence.

Tex., Bellville—Austin County, Wallis Road Dist., will build 9 mi. road on S. H. No. 36; may purchase S. A. & A. P. R. R. bridge across Brazos River; plans voting on \$100,000 bonds. Address County Commrs.

Tex., Bonham—For proposal details see Mch. Wanted—Road Construction.

Tex., Columbus—Colorado County plans building S. H. No. 3-D, between Columbus and Lagrange, will vote Jan. 27 on \$100,000 bonds; B. H. Faber, County Engr.

Tex., Fort Worth—City Comsn. plans paving Division St. from S. to 15th Sts., and parts of 7th, 8th, 9th, T and U Sts., all Midland Heights; also plans paving 23rd and 24th Sts.

Tex., Fort Worth—City Comsn., plans expending \$28,125.25 to pave Macon St. from W. 5th to North Sts.; and \$7148 for Clinton Ave., between Central Ave. and 12th St., North Side.

Tex., Galveston—Galveston County plans improving roads and building permanent road to Harris County line; plans voting latter part of Jan. on \$1,000,000 bonds. Address County Commrs. (Lately noted.)

Tex., Glen Rose—Somervell County plans completing Highway No. 10-A, from Dallas to Cleburne, Glen Rose and Thurbur; will vote Jan. 16 on \$175,000 bonds. Address County Commrs.

Tex., Hondo—Medina County, R. J. Noonan, County Judge, let contract to Kuykendall & Shelton, at \$149,388.15 to grade and construct drainage structures on 23.50 mi. road on S. H. No. 3, Sections A and C. (Lately noted.)

Tex., Houston—O. F. Holcombe, Mayor plans opening new route from Houston Hgts. into business section of Houston through Woodland Heights as follows: pave N. Main St. to Michaux Ave., through Norhill Addition and Studewood, over Pecore Ave. to 11th St. in Heights; J. C. McVea, City Engr.

Tex., Jourdanton—Atascosa County Commissioners Court, W. R. Hill, County Judge, let contract to C. M. Kelley & Co., San Antonio, Tex., at \$16,348.32 for 1.7 mi. S. H. No.

2 (Meridian Highway) through County. (Lately noted.)

Tex., Kaufman—Kaufman County let contract to C. W. Burgess, 501 Dallas County State Bank, Dallas, at \$9005.68, to grade and construct drainage structures on S. H. No. 15, from Terrell 3.7 mi. east; L. M. Ferlet, County Engr. Terrell.

Tex., Lagrange—Fayette County, J. P. Ehlinger, County Judge, plans 8.01 mi. 16-ft. gravel road on S. H. No. 3-B; F. A. Proj. No. 319; \$70,000; A. Schlafl, County Engr.

Tex., Laredo—Webb County Commrs. Court, A. Winslow, County Judge, let contract to Peterman, Robinson & Neyland, Laredo, at \$150,000 to gravel 110 mi. road from Laredo to Mirando City and Oilton. (Lately noted.)

Tex., Nacogdoches—Nacogdoches County will vote Jan. 2 on \$750,000 bonds for roads. Address County Commrs.

Tex., Park Place—For full details see Sewer Construction.

Tex., Pecos—Reeves County, J. F. Ross, County Judge, let contracts to Tibbetts Construction Co., 209 1/2 8th St., Fort Worth, Tex., to gravel surface 2 sections of roads as follows: 3.75 mi. S. H. No. 17-A, F. A. Proj. No. 320, at \$17,739.22; 4.53 mi. S. H. No. 27, at \$27,180.54. (Lately noted.)

Tex., San Angelo—Tom Green County, plans improving 16.4 mi. S. H. No. 9-A, from 8.5 mi. southeast of San Angelo to Concho County line, F. A. Proj. No. 338; \$53,138; also 15.4 mi. S. H. No. 9-A, F. A. Proj. No. 229; Gibb Gilchrist, Engr.

Tex., San Antonio—Ch. Engr., U. S. Bureau of Public Roads, Washington, D. C., approved plans for 8.38 mi. 18-ft. gravel road on S. H. No. 2, Bexar County, from Leon Creek to Artesian Belt Ry., F. A. Proj. No. 264; \$119,000; R. E. Killmer, County Engr.

Tex., Silverton—For proposal details see Mch. Wanted—Road Construction.

Tex., Tyler—Smith County will receive bids soon for 8.08 mi. 18-ft. gravel road on S. H. No. 31, \$130,000; D. R. Caldwell, County Engr.

Tex., Uvalde—Uvalde County plans 16 mi. 16-ft. gravel bituminous road on S. H. No. 3, F. A. Proj. No. 289; \$136,000; Ditzler H. Jones, County Judge; Mack B. Hodges, County Engr.

Tex., Waco—Ch. Engr., U. S. Bureau of Public Roads, Washington, D. C., approved plans for 5.9 mi. 18-ft. bituminous road on Dallas-Waco Highway from Elm Mott north; \$62,689; Mantan Hannah, County Engr.

Tex., Waco—McLennan County Commrs. Court, Giles P. Lester, County Judge, let contract to Wear & Thomas, Rogers, Tex., at \$29,946.62, for 4 mi. road from McGregor toward Waco. (Lately noted.)

Va., Richmond—For proposal details see Mch. Wanted—Road Construction.

West Virginia—State Road Comsn., Charleston, W. Va., plans building 5 roads as follows: 10 mi. Sycamoredale-Janelev road on north and south highway; 1 1/2 mi. Salem to Doddridge County line road on Northwestern Turnpike; 2 1/2 mi. Bridgeport to Taylor County line road on Northwestern Turnpike; 4 1/2 mi. road from Taylor County line to improved road near Pruntytown, Northwestern Turnpike; Phillippi to Webster road on Elkins-Wheeling highway.

West Virginia—State Road Comsn., Charleston, W. Va., let contracts to grade, construct drainage structures and surface 14 roads as follows: Braxton County, 8.3 mi. Gassaway-Frametown road, to Sutton Construction Co., Ashland, Ky., \$231,526; Doddridge County, 8.2 mi. Northwestern Turnpike, to Rogers & Shumway, Worthington, W. Va.,

\$120,577; Jefferson County, 7 mi. Charles Town-Kerneysville road, to Moore & Leslie, Staunton, Va., \$139,442; McDowell County, 7.5 mi. War-Newhall road, rock asphalt paving, to W. J. Weakland & Co., Charleston, W. Va., \$297,421; Mineral County, 8 mi. Claysville to Grant County line road, to McLean Contracting Co., Fidelity Bldg., Baltimore, Md., \$90,936; Monroe County, 5 mi. Union-Rock Camp road, to Joe Corolla, Ronceverte, W. Va., \$62,972; Nicholas County, 6 mi. Gilboa-Brennen road, to Tiehner & Landacre, Richwood, W. Va., \$83,307; Pendleton County, 7 mi. Petersburg-Franklin road, to W. J. & J. B. Gephart, Elkins, \$66,111; Pleasants County, 3 mi. River road, gravel surfacing, to Rogers & Shumway, \$59,933; Pocahontas County, 6 mi. Sunset-Frost road, to Sutton Construction, \$63,465; Raleigh County, 6 mi. Shady Springs-Summers County line road, to E. K. Newell, Maysville, Ky., \$81,694; Randolph County, 12 mi. Valley Head-Webster County line road, to Belasco Construction Co., Webster Springs, W. Va., \$187,243; Wayne County, 5.5 mi. Marrowbone-Crum road, to C. E. Price, Huntington, W. Va., at \$96,063; Wetzel County, 3 mi. River road, gravel surfacing, to Ritchie & Ritchie, Ravenswood, W. Va., \$19,545. (Lately noted.)

Sewer Construction.

D. C., Washington—For proposal details See Mch. Wanted—Sewer Construction.

Fla., Daytona—For full details see Land Developments.

Fla., St. Petersburg—For full details see Land Developments.

La., Covington—For full details see Water Works.

La., Monroe—For proposal details see Mch. Wanted—Paving and Sewer Construction.

Md., Baltimore—For full details see Land Developments.

Md., Baltimore—Board of Awards, Wm. F. Broening, Prest., opened bids for construction of lateral sewers as outlined in Contract 194; The Aiello Construction Co., 76 Kalcherbocker Bldg., Balto., lowest bidder at \$52,379.68. (Lately noted.)

Md., Baltimore—For full details see Land Development.

Md., Hyattsville—Washington Suburban Sanitary District, Robt. B. Morse, Ch. Engr. plans the expenditure of \$2,000,000 during 1923 for water main and sewer extensions. (Lately noted.)

Mo., Moberly—City Council will open bids Jan. 1 for construction of sewer in District No. 42.

Okla., Guthrie—For full details see Water Works.

Tenn., Nashville—City, S. H. McKay, City Clerk, let contract to J. Tallen for constructing pipe sewer in Alley No. 639; about 750 ft. of 10 and 8 in. clay pipe. (Lately noted.)

Tenn., Ripley—City will increase capacity of ice plant, gravel streets, and install sewer system; will vote Jan. 18 on \$100,000 bonds. Address The Mayor.

Tex., Fort Worth—For full details see Water Works.

Tex., Harlingen—City Council let contract at \$61,053.40 to Krueger & Haynes Construction Co. of San Antonio, for construction of sanitary sewer system (lately noted.)

Tex., Park Place—City, Wm. N. Pearson, Mayor, voted \$75,000 sewer bonds and \$100,000 paving bonds; \$5000 city hall and fire station bonds.

Va., Richmond—For proposal details see Mch. Wanted—Sewers.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Shipbuilding Plants.

Md., Baltimore—H. E. Crook Co., 28 Light St. have leased 10,000 ton marine railway and dry dock facilities of Union Shipbuilding yard at Fairfield.

Street Railways.

Fla., Miami—Expenditures totaling over \$350,000 are contemplated for the Municipal Street Railway here and include several extensions, double tracking, sidings, enlargements and improvements to car barns, shops and sub-stations, besides some equipment. F. H. Wharton is City Manager.

Tex., El Paso—Plans to spend \$500,000 for improvements during 1923 on the El Paso Electric Railway property have been approved, it is announced. A. H. Warren is Gen. Mgr.

Telephone Systems.

Fla., Plant City—Peninsular Telephone Co., purchased building corner Haines and Collins Sts., will remodel, install automatic system; equipment purchased.

Tex., Dallas—Dallas Telephone Co., 1402 Jackson St. remodel main exchange building, approx. cost \$12,000.

Textile Mills.

Ala., Albany—Hosery—Cooper-Wells Knitting Co., Benton Harbor, Mich., reported to erect hosery plant.

N. C., Bladenboro—J. L. Bridger interested in erection of cotton mill; plans completed.

N. C., Charlotte—Charlotte Knitting Mill, South Boulevard & Arlington Aves. will double capacity of plant; will install new lighting system, new floors; will also install 32 knitting machines.

N. C., Granite Falls—Granite Falls Mfg. Co. increased capital from \$400,000 to \$1,200,000.

N. C., Greensboro—J. E. Latham Co. increased capital to \$2,000,000.

N. C., Hickory—Ivey Mill Co. increased capital from \$225,000 to \$1,000,000.

Tenn., Trenton—Trenton Textile Mills, Inc., capital \$125,000, inceptd. with Sol Shatz, Kenton, Prest.; Ira F. Phillips, Trenton, Mgr.; Fred Owens, Milan, Secy.; will take over and operate Lovera Cotton Mills.

Va., Danville—Riverside and Dan River Cotton Mills are having plans prepared for extension to their water storage and supply for their new bleaching and finishing plant together with additional filtering capacity; Lockwood, Greene & Co., Inc. of Boston and Charlotte are engineers.

Water Works.

Ala., Haleyville—City plans to install electric light and water plant; will construct engine building; will install two 100 H. P. engine and two 65 K. W. generators. Address The Mayor.

Ala., Jackson—City has let contract to Gray Artesian Well Co., Pensacola, Fla. to put down and develop wells to yield about 200 gal. of water per minute.

Ark., Fort Smith—City, Pagan Bourland, Chrmn. will expend \$500,000 in extension to water works system with capacity of 11,000,000 gal. (Lately noted).

Fla., St. Petersburg—For full details see Land Development.

Fla., Zephyrhills—For proposal details see Mchly Wanted—Paving and Water Works.

Ga., Morven—City will vote on Jan. 13 on \$8000 bonds for establishing water works system. Address The Mayor.

La., Covington—Alonzo B. Hayden, Inc., Pass Christian, Miss., is lowest bidder for laying water and sewer main; Kramer Engineering Co., Engrs. (Lately noted having contract for waterworks at Pass Christian.)

La., Delhi—City will vote on Jan. 16 on issuance of \$60,000 bonds for purchase or construction of water works system; will also create sewerage Dist. No. 1 and vote on \$50,000 bond issue. (Lately noted).

Mo., La Plata—City votes Dec. 29 (Change of date) on \$190,000 bonds for water and sewer system. Address The Mayor.

Md., Baltimore—For full details see Land Developments.

Md., Hyattsville—For full details see Sewer Construction.

Mo., Mountain Grove—City voted \$15,000 bonds for improving water works. Address The Mayor. (Lately noted).

Okl., Guthrie—City voted \$80,000 bonds for water works and sewer extensions. Address The Mayor.

Okl., Woodward—City voted \$175,000 bonds for construction of water works plant and distribution system; Black & Veatch, Mutual Bldg., Kansas City, Mo., Engrs. (Lately noted).

Tex., Fort Worth—City will vote on Dec. 30 (Change of date) on \$2,750,000 bonds for the following: \$1,500,000 for water and sewers; \$800,000 for streets; \$250,000 for lights; \$200,000 for fire and police equipment. Address The Mayor.

Tex., Perryton—City voted \$100,000 water and light bonds. Address The Mayor.

Va., Appomattox—For full details see Electric Light and Power Plants.

Va., Danville—For full details See Textile Mills.

Woodworking Plant.

Ark., Fort Smith—Eads Bros. Furniture Co., increased capital to \$250,000.

La., Lake Charles—Decoys—C. W. Grubbs, Pascagoula, Miss., reported, contemplating establishing factory for mfrs. of decoys.

La., Plaquemine—Shingles, etc.—Baist Shingle Mill Co. has under construction plant with daily cutting capacity of 35,000 feet lumber; mfrs. shingles and laths.

Mo., Kansas City—American Sash & Door Co., 16th St., will erect plant addition; approximately cost \$20,000.

Mo., Springfield—Incubators—Ozark Incubator Co., 45 Elks Arcade, organized by Seth T. Woods and Arthur S. Ferguson; have begun mfrs. of redwood incubators; contemplates early next year to establish factory and install equipment including, automatic planes, saws, jigs, metal working mchy. and cabinet work tools; capacity of incubator vary in size from 125 to 600 eggs; also plans the mfrs. of brooder stove.

N. C., Albemarle—Morgan Furniture Co., capital \$50,000, inceptd. by T. E. Morgan, J. W. and B. D. Efrid.

N. C., Lenoir—Lenoir Furniture Co. increased capital to \$250,000.

Tenn., Knoxville—Hall & Donahue Coffin Co., increased capital to \$100,000.

Tex., Dallas—Dallas Coffin Co., increased capital from \$300,000 to \$500,000.

Va., Martinsville—Truck Bodies, etc.—T. S. Williamson, Danville, Va. and E. C. Anderson, Montreat, N. C., reported to have pur-

chased plant of American Truck Body Co., will re-organize; mfrs. automatic brick and dump bodies for automobile trucks.

W. Va., Bluefield—Bluefield Furniture Co., increased capital from \$100,000 to \$250,000.

FIRE DAMAGE

Ala., Jasper—L. D. Gray's residence.

Ark., Luxora—S. E. Simonson's residence, owned by Meadows Bros., Okolona.

Ga., Athens—Georgia Brick Co.'s plant; loss \$40,000.

Ky., Hopkinsville—Miss Frances Backman's buildings; loss \$10,000.

Ky., Hutchison—Wm. Craycraft's tobacco barn; loss \$10,000.

Md., Glenarm—Hartley Mills Supply Co.'s flour and feed mill; loss \$10,000.

Md., Catonsville (Sta. Baltimore)—Victor G. Bloede's residence; loss \$60,000.

Miss., Kosciusko—H. Buck's residence; loss \$8000.

Mo., St. Louis—H. W. Beck & Son's Feed & Seed Co.'s plant at 5701 Manchester Ave.;

Mo., St. Louis—St. Louis Asphalt Co.'s two story brick building, loss \$10,000; W. M. Stringer, Prest. of company.

Mo., St. Louis—Foster Ice & Fuel Co.'s garage at 1515 N. Grand Blvd.; loss approx. \$30,000.

N. C., Charlotte—W. F. Dowd's apartment building; loss \$20,000.

N. C., Charlotte—Trust Building owned by C. W. Johnston; Brockmann Building owned by Jno. M. Scott; building occupied by general Heating Co.

N. C., La Grange—Isabel Theater owned by L. F. Davis.

N. C., Lumberton—McLellan's Store, building owned by A. W. McLean; loss \$15,000.

N. C., New Bern—Dwelling owned by W. E. Parker.

N. C., Wallace—W. H. Hackney's building.

Okl., Madill—A. M. Chastaine's residence east of Madill. loss \$10,000.

Tenn., Columbia—Cross Bridges Milling Co.'s plant, owned by Adams and Graves; loss \$20,000.

Tenn., Lebanon—Denton Coal Co.'s coal office and feed store, S. Cumberland St.

Tenn., Leoma—J. A. Richardson's residence; Fred Richardson's residence.

Tex., Center—Residence of C. C. Elliott, Mgr., Polley Hotel.

Tex., Fort Worth—Paper storage and press rooms of Star-Telegram; loss \$15,000.

Tex., Georgetown—Georgetown Water, Gas Power & Electric Co. plant; loss \$50,000.

Tex., Hallettsville—Lavaca Oil Mill's meal house.

Tex., Waco—Second Baptist Church, 1215 S. Second St.; Rev. A. A. Lucas, Pastor.

Va., Appomattox—Appomattox Light & Power plant.

Va., Cape Charles—Farmers' Mfr. Co.'s barrel factory; loss \$10,000.

Va., Richlands—James Smith's residence near Richlands.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

Ga., Atlanta—Ross Hunter will erect \$150,000 building, E. 12th St. and Bedford Place; 3 stories.

Mo., Jefferson City—H. H. Miller, P. O. Box 614, will erect 3-story building, Washington and McCarty Sts.; brick; about 30 suites; hardwood floors; architect not selected. (Lately noted).

Mo., Kansas City—Quality Builders, Inc., 307 Commerce Bldg., will erect six buildings, 45x35 ft. each, two, 128x28 ft., and two, 45x57 ft., lately noted; all 3 stories; brick; rubble stone foundations; hardwood floors; flat roofs; N. E. Peters, Archt., Marion; owner builds; Laitner Bros., Kansas City, heating and plumbing. (See Mch. Wanted—Flooring (Hardwood)).

N. C., Charlotte—Page Apartments, Inc., H. A. Page, Aberdeen, T. T. Cole, Charlotte, and others, will convert Woman's Club building, Elizabeth Ave. and Hawthorne Lane, into apartment house; also plans 2 more buildings at same address.

S. C., Greenville—L. H. Cary and Cleveland Beattie will erect apartment building, E. Stone Ave.; 2 stories; two 6-room suites.

Tenn., Memphis—Sieg & McDaniels are preparing plans for \$75,000 apartment on Union St. near Tucker St.; 2 stories; 8 six-room suites.

Tex., El Paso—Mortgage Investment Co. is considering erection of \$125,000 apartment house, Arizona and N. Oregon Sts.; Lee H. Orndorff, Prest., Orndorff Construction Co., interested.

Association and Fraternal.

Ala., East Lake (Sta. Birmingham)—East Lake Lodge No. 480, A. F. & A. M., Geo. W. Burt, Worshipful Master, will erect temple; 100x150 ft.; 3 stories; first floor for stores.

La., Shreveport—Elks Club plans to erect 11-story annex with natatorium, gymnasium, assembly room, women's parlor, etc.; will also enlarge lodge room and library.

N. C., Gastonia—Gastonia Masonic Temple Assn., inceptd. with \$100,000 capital stock; F. C. Abernethy, Marshall Dilling, and others interested.

Tex., Abilene — Parramore Post No. 57, American Legion, plans \$75,000 memorial building and clubhouse. Address Judge J. M. Wagstaff, Chrmn. Memorial Comm.

Tex., Dallas—East Dallas Masonic Lodge, John H. Collom, Worshipful Master, plans to erect building, Collett Ave. near Columbia Ave.

Tex., Dallas—Oak Cliff Lodge No. 37, I. O. O. F., R. H. Sawyer, Vice Grand Master, plans building.

Bank and Office.

Ala., Decatur—Albany-Decatur Chamber of Commerce will erect building; 2 stories and basement; offices on first floor; auditorium on second.

Fla., Jacksonville—Florida Baptist State Board of Missions will erect \$100,000 building to contain offices of board, printing plant of Baptist Witness, and book concern; 4 stories; 100x40 ft.; brick; details determined Jan. 11; Dr. J. W. Mitchell, Editor and Mgr. Baptist Witness.

Ga., Atlanta—Morris Plan Co. will erect building, 98 N. Pryor St.

Mo., Kansas City—Dr. Marion A. Dickey purchased site, Independence and Prospect Ave., and plans to erect 3-story store and office building; Lodge and Gornall, Archts.

N. C., Asheville—W. H. Westall will erect \$80,000 building as annex to Jackson Building; 7 stories; stores on first floor; offices above.

Okla., Chickasha—J. L. Burtch and associates, are considering erection of 7-story building, 400 block Chickasha Ave.

Tex., Houston—J. M. West, Prest. South Texas Lumber Co. and West Lumber Co., will add 4 stories to J. M. West Bldg., Main and Fannin Sts., for offices.

Tex., Telf—John M. Mariott, San Antonio, prepared plans for bank and business building; 2 stories; brick and tile; cast stone trim; store fronts on lower floors; steam heat; reinforced concrete basement.

W. Va., Morgantown—Judge Frank Cox and others plan 7-story office building, High and Pleasant Sts.

Churches.

Ala., Collinsville — Methodist Episcopal Church, Walter T. Weaver, Chrmn. Bldg. Comm., will erect brick building; cost \$15,000 to \$18,000.

Ark., Pine Bluff — Beech Street Baptist Church, Rev. V. H. Coffman, Pastor, will erect \$40,000 building, 25th and Beech Sts.; 2 stories and basement; brick.

Fla., Perry—Church of Christ, Scientist, plans to erect building. Address The Reader.

Ga., Savannah—Primitive Baptist Church, Lawton Memorial Hall, will erect building. Address The Pastor.

La., Pointe a la Hache—St. Thomas Catholic Church, Rev. J. Girault de la Corgnais, Pastor, will erect building to replace burned structure.

Mo., Kansas City—Martha Slavens Memorial M. E. Church will remodel and enlarge building; construct entrance tower and wing; Wilkinson & Grans, Archts.

Mo., Kansas City—Swope Park Baptist Church will erect \$12,500 building, 2600 Meyer Blvd. Address The Pastor.

N. C., Engelhard — Engelhard Methodist Church plans \$15,000 building. Address The Pastor.

N. C., Statesville—Lutheran Church will erect building; Louis H. Asbury, Archt., Charlotte.

N. C., Worth—Lutheran Church will erect building; Louis H. Asbury, Archt., Charlotte.

Okla., McAlester — First Presbyterian Church, A. B. Ringland, Chrmn. Bldg. Comm., First Nat. Bank Bldg., receives bids until Jan. 15 to erect 2-story and basement building; brick and stone trim; \$75,000; 108x88 ft.; concrete and yellow pine floors; reinforced concrete foundation; asbestos shingle or slate roof; hollow fireproof and interior tile; ventilators; plans and specifications from Hawk & Parr, Archts., Oklahoma City, and from Bldg. Comm.; foundation in. (Lately noted).

S. C., Charleston—St. Michael's Episcopal Church, Rev. Albert S. Thomas, Rector, pur-

chased site 35x95 ft. and will erect Sunday School and parish house building.

Tenn., Chattanooga—Mizpah Temple, Rev. A. Holtzberg, Rabbi, will erect \$25,000 annex; 3 stories; brick; fireproof.

Tenn., Dresden—Methodist Episcopal Church, Dr. J. L. Jones, Chrmn., Bldg. Comm., will erect building; contract by Feb. 1.

Tenn., Memphis — Idlewild Presbyterian Church, Walker L. Wellford, Chrmn. Bldg. Comm., reported to erect \$100,000 to \$125,000 building, McLean Blvd. and Union Ave.

Tex., Winona—Baptist Church, Rev. J. B. Oliver, Pastor, will erect \$20,000 building; auditorium to seat 600, Sunday school rooms, etc.; Birch D. Easterwood, Archt., Waco.

Va., Richmond—Central Methodist Church, South Richmond, will erect Sunday school building; 80x50 ft.; 2 stories; Baskerville & Lambert, Archts.; bids opened Dec. 22. (Previously noted).

W. Va., Montgomery—Methodist Episcopal Church, South, Rev. J. L. Vincent, Pastor, will erect \$80,000 building; F. E. Smart, O. K. Robinson and others, Bldg. Comm.

W. Va., Wayne—Wayne M. E. Church, South, plans to erect building. Address The Pastor.

City and County.

Md., Baltimore—Fire Stations—Board of Awards, Mayor Wm. F. Broening, Prest., will receive separate bids in duplicate at office of Richard Gwinn, City Register, City Hall, until Jan. 3 to erect engine houses Nos. 25, 47, 57, 58, 59, engine house No. 56 and truck house No. 24, and engine house No. 55 and truck house No. 23; drawings and specifications at office J. F. Crowther, Inspector of Buildings, City Hall.

Tex., Fort Worth—Fire Station—City Comm., will erect fire station to replace station No. 8; cost \$14,000.

Tex., Houston—Library—City, Rev. Harris Masterson, Chrmn. Bldg. Comm. of Library Board of Trustees, will erect \$200,000 first unit, McKinney and Bagby Sts.; Watkin & Glover, Archts., Houston; Cram & Ferguson, Consult. Archts., 15 Beacon St., Boston. (Previously noted).

Tex., Rosenberg—City Hall—City Comm., plan to erect \$20,000 city hall; ordered election Jan. 10 on bonds.

Courthouses.

Fla., Tampa—Hillsborough County Commrs., will erect addition to courthouse; \$50,000; Fred J. James, Archt.

Fla., Tavares—Lake County will erect courthouse; \$200,000; 64x150 ft.; 3 stories; face brick, Hy-tex or equal; fireproof; column and beam construction; concrete, hardwood and tile floors; tile roof; concrete foundation; Dunham vacuum heating system; Otis passenger elevator; plans completed about Jan. 15; alternate bids received on limestone, terra cotta, and art stone for exterior trim; F. H. Trimble, Orlando, and Alan J. MacDonough, Eustis, Asso. Archts. Address Mr. Trimble. (Lately noted).

Ga., Adel—Cook County Commrs. will not erect courthouse as lately reported; purchased building and are expending \$1500 for repairs.

Dwellings.

Ark., Camden—First Presbyterian Church, Rev. Chas. Hadden Nabers, Pastor, will erect manse; brick veneer; hardwood floors; concrete foundation; 2 stories. (Lately noted).

Fla., Allandale—Wm. N. Flinn and asso-

ates, Camden, N. J., are reported to have purchased 1000 acres, including town of Landale, and to develop; construct streets, waterworks, etc.; S. B. Taylor, Taylor Construction Co., Philadelphia, reported to superintend erection of number of dwellings; Chas. D. Thompson, Camden, Office Mgr., Daytona, Fla.

Fla., Key West—Murray Cochran will erect \$20,000 building, White St. and County Rd.; 3 stories; first floor for dance and reception room and restaurant; upper floors for 22 rooms; also plans to erect 2 bungalows adjoining and repairs to residence; \$13,000.

Fla., Miami—James B. Spencer, Roberts Hotel, will erect residence.

Fla., Perry—American Legion organized company to erect number of dwellings; one 5-room dwelling to be erected first.

Ky., Whitesburg—Elkhorn-Jellico Coal Co. will erect 20 miners' houses; contract at once.

Ky., Whitesburg—Fame-Elkhorn Coal Co. will erect 50 miners' houses; contract at once; also erect coal tippie.

La., New Orleans—Isidore Singer, 2016 Coliseum St., plans several dwellings, Dante and Colapissa Sts.

Md., Baltimore—Harry Kirkwood will erect Spanish type residence, Brosius and Ridgely Sts.; Mt. Washington Hgts.; 2 stories; stucco; 8 rooms; J. T. Levesque & Co., Archts., 202 N. Calvert St.

Md., Baltimore—Star Construction Corp. will erect 8 dwellings east side Litchfield Ave., north of Oakmont Ave., and 2 west side Beaumont Ave., north of Oakmont Ave.; former 19x30 ft.; latter, 21.4x34 ft.; all 2 stories; brick; steam heat; total \$30,000; Geo. Wessel, Archt., 3001 Lytleton Rd.

Md., Baltimore—E. J. Gallagher Realty Co., 919 Munsey Bldg., will erect 18 dwellings, 800-16 and 801-17 Venable Ave.; 2 stories; brick; 17x30 ft.; steam heat; \$64,000; E. J. Gallagher, Jr., Archt.; owner builds. (Lately noted).

Md., Baltimore—Martin J. Heller, 2801 W. Lafayette Ave., will erect 18 dwellings, west side Prospect St. near Dukeland St.; \$36,000; 2 stories; brick.

Md., Baltimore—Murray & Haynes, Inc., Garrison and Duval Aves., will erect 2 frame bungalows, Lawina Ave. near Bateman Ave.; \$9,000 each; 30x41.6 ft.; 1½ stories; oak strip border floors; stone foundations; slate roof; W. H. Murray, Archt.; owner builds; Henry Voltz, 3110 W. North Ave., American heating plant and plumbing. (Lately noted).

Md., Baltimore—A. L. Sander, 3800 Dairymple Ave., will erect \$10,000 residence, Gwynn Oak Ave. near Beech Ave.; 2 stories; frame; 30x36 ft.

Md., Baltimore—Cityco Realty Co., 2 E. Lexington St., purchased 170-acre tract of idle/lynde development, and plans to develop; construct streets, sewers, etc., and erect dwellings; details not determined.

Md., Baltimore—City Real Estate Co., 11 E. Fayette St., will erect 6 one-story frame dwellings, Richards Ave. near Southern Ave.; \$20,000; 26x31 ft.; Geo. Wessel, Archt., 3001 Lytleton Rd.; construction by owner. (Lately noted).

Md., Baltimore—Atlas Construction Co., 339 Courtland St., Alfred Courtney Doyle, Prest., is erecting 15 two-story brick dwellings; John R. Forsythe, 232 St. Paul St., Consult. Archt.

Miss., Crystal Springs—Mrs. W. R. Hennington plans 2-story rooming house, Marion Ave.

Miss., Kosciusko—H. Buck plans to rebuild residence noted burned at \$5000 loss.

Mo., Kansas City—G. S. Minkin will erect \$16,000 dwelling, 809 W. 57th St.

N. C., Oxford—St. Stephens' Episcopal Church will erect rectory on College St. Address The Rector.

Tenn., Rogersville—Scott-Kitzmillier Co. will erect 40 dwellings for employes of hosiery mill.

Tex., Amarillo—Plains Housing Co. will erect 70 dwellings on sites near United States Zinc Co.'s proposed smelter; will probably erect additional dwellings later.

Tex., Dallas—A. Lyons will erect \$10,000 brick veneer dwelling, 1328 Kingshighway.

Tex., Dallas—Joe Martin will erect 5 dwellings, 5407-11-15 Melrose and 5434-37 Bonita Sts.; 5 rooms; frame; \$13,000.

Tex., San Antonio—Jas. Maverick, Maverick Sunshine Ranch, will erect residence; 1 story; Colonial type; concrete porches; foundation completed; Alfred Giles & Co., Archts.

Tex., San Antonio—Albert Piper will erect 2-story residence, E. Mulberry St.; brick, tile and stucco; Chas. Boelhauwe, Archt., bids opened.

Tex., San Antonio—F. H. Yeagley will erect 7 dwellings, 2 Calaveras, 1 Perez, and 3 Berkshire Sts.; 4 and 5 rooms; \$12,000.

Va., Norfolk—C. C. Fitch will erect 3 dwellings, blocks 3 and 21, plat of Larchmont; 2 stories; frame; \$12,500.

W. Va., Charleston—Libby-Owens Sheet Glass Co., Thos. McKinley, Supt., is reported to erect 200 dwellings at Kanawha City for employes.

W. Va., Williamson—Sycamore Hughes Co., S. H. Goodton, Jr., Prest., purchased 300 lots and will erect \$3000 to \$5000 dwellings.

Hospitals Sanitariums Etc.

Ala., Tuscumbia—Drs. E. T. Newsom, W. H. Greer and others, are considering erection of \$75,000 hospital.

Ark., Little Rock—Missouri-Pacific R. R., Dr. W. E. Smith, Little Rock, Div. Surgeon, will erect \$450,000 hospital, Lincoln Ave.; 4 stories and basement, 81x126 ft., with wings; reinforced concrete, steel and brick; foundation to support additional stories; refrigerating plant, laundry, boiler rooms, smoking rooms, etc., in basement; 125 beds; H. J. Moler, St. Louis, Prest. Hospital Board of Managers.

Tex., Houston—Geo. H. Hermann Estate will receive bids until Jan. 8 to erect \$600,000 hospital; 275 beds; fireproof; reinforced concrete; tile roof; terrazzo and concrete floors; hollow fireproof and interior tile; ornamental terra cotta; metal doors; wire glass; steel sash and trim; nurses' home; service building; Berlin, Swern & Randall, 19 S. La Salle St., Chicago, and Alfred C. Finn, Foster Bldg., Houston, Asso. Archts.-Engrs. (Previously noted).

Hotels.

Fla., Rockledge—Martin A. Metzner, Horace Shares and associates will erect \$250,000 tourist hotel on site of old Indian River Hotel; 100 rooms with private bath.

Ky., Paintsville—Rotary Club is promoting erection of 50 to 60-room hotel.

Mo., Cape Girardeau—W. D. Black will erect addition and improve Flentge Hotel; \$200,000; 5 stories; 47x166 ft.; reinforced concrete; concrete floors and foundations; Study & Farrar, Archts., St. Louis. (Lately noted).

Va., Pulaski—Col. R. R. Moore contemplates erection of hotel on First St.

Miscellaneous.

Ky., Louisville—Stadium—Louisville Baseball Club, Capt. Wm. Neal, V.-P., will erect \$100,000 stadium in Eclipse Park, including grandstand to seat 12,000; steel and concrete; Leslie Abbott, Archt.

N. C., Asheville—Assembly Buildings—Blue Ridge Assn., Dr. W. D. Weatherford, Nashville, Secy., will erect gymnasium, \$20,000 to \$25,000; library, \$20,000; classroom building, \$20,000; dormitory, \$30,000.

Okla., Haskell—Armory—Summers Bros. will erect armory for 2nd battalion headquarters and combat train, 160th F. A., Okla. N. G.; 40x62 ft.; 2 stories.

Tex., Dallas—Clubhouse—Dallas Athletic Club will receive bids until Jan. 15 at office Lang & Wittich, Archts., 200 American Exchange Natl. Bank Bldg., to erect building at Elm, St. Paul and Live Oak Sts.; separate bids on general contract; heating, plumbing and electrical work and elevators; Georgian renaissance type; 12 stories; brick; limestone or terra cotta trim; 6 bowling alleys; main dining room, 44x100 ft.; 2 stories; gymnasium, 46x106 ft.; swimming pool, 30x75 ft.; 6 upper floors for bedrooms with private bath, shower or tub; reported cost \$2,000,000; plans and specifications at office architects. (Previously noted).

Tex., Houston—Clubhouse—K. E. Womack, Chrmn. Comm., to organize Riveroaks Country Club, plans to erect fireproof clubhouse.

Tex., Tyler—Clubhouse—Willow Brook Country Club will erect \$10,000 building.

Railway Stations, Sheds, Etc.

Va., Richlands—Norfolk & Western R. R., J. E. Crawford, Ch. Engr., Roanoke, will expend \$15,000 for improvements.

Schools.

Ky., Louisville—Board of Education, Samuel D. Jones, Bus. Director, 8th and Chestnut Sts., will erect additions, alter and install plumbing, electric lights heating and ventilating at J. B. Atkinson School; \$45,000; addition, 2 stories and basement; 29x85 ft.; 4 rooms; hollow fireproof tile; concrete and maple floors; concrete foundation; tin roof; interior tile; wire glass; Edgar A. Rassinier, Archt., 8th and Chestnut Sts.; bids opened Dec. 22. (Lately noted).

La., Slidell—St. Tammany Parish School Board, Covington, will call election probably in January on \$16,000 bonds to erect additional schools in Slidell and annex to present building in Pearl River.

Md., Berwyn—Building Committee, A. B. Gahan, Chrmn., Box 131, will receive bids until Jan. 20 to erect 4-room brick school; plans and specifications from Chas. M. Lightboun, Archt., Cottage City.

Miss., Gulfport—City will vote Jan. 6 on \$175,000 bonds to erect high school; 2 stories; brick; concrete foundation; auditorium to seat 1000; W. R. Barber, Prest. Board of School Trustees.

Mo., Kirksville—City defeated \$190,000 bonds to erect junior high school. (Lately noted).

Mo., Paynesville—Paynesville Consolidated School Dist. voted \$12,000 building bonds. Address Dist. School Trustees.

Mo., St. Louis—Washington University, Dr. W. E. McCourt, Dean of Engineering School, will erect \$250,000 building for department of geology, gift of Mrs. Newton R. Wilson; Tudor Gothic architecture; Southeast Missouri granite; also plans building for School

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of Commerce and Finance, gift of Chas. H. Duncker, and building for School of Fine Arts, gift of W. K. Bixby; \$250,000 each.

Mo., Springfield—Sigma Nu Alumni Assn. of Springfield, Lawrence Lee, Prest., is promoting erection of \$25,000 chapter house for Epsilon Beta Chapter.

N. C., High Point—Board of Education will erect several schools.

N. C., Landis—Rowan County School Board, Salisbury, will erect building; 2 stories and basement; 20 classrooms and auditorium; brick; limestone trim; tile roof; Louis H. Asbury, Archt., Charlotte.

N. C., Raleigh—Board of Education, S. B. Underwood, Supt., will receive bids until Jan. 3 (extended date) to erect Wiley Elementary School; plans and specifications at office C. Gadsden Sayre, Archts., Anderson, S. C., and Raleigh. (Lately noted).

N. C., Walnut Cove—Walnut Cove Special School Tax Dist. will vote Jan. 16 on \$15,000 school bonds; Jas. R. Bowen, Clk., Board of County Commrs., Danbury.

S. C., Rock Hill—Rock Hill School Dist. No. 12, R. C. Burts, Secy., will receive bids until Jan. 12 to erect high school; plans and specifications at office A. D. Gilchrist, Archt.

Tex., Denton—School Board will erect structure to replace Lee School; election Jan. 13 on \$65,000 bonds.

Tex., Electra—City is considering erection of school building. Address The Mayor.

Tex., McKinney—City will vote Jan. 20 on \$100,000 bonds to erect junior high school and additions to 2 ward schools; J. S. Carlisle, City Supt.

Tex., Taylor—Navajo County School Dist. No. 6 will vote Jan. 6 on \$14,500 building bonds; Mary Shumway, Dist. Clk.

Va., Petersburg—City School Board, F. M. Martin, Supt. of Schools, will erect building on E. Bank St., East Ward; bids opened Dec. 28; Fred A. Bishop, Archt., McIlwaine Bldg.

Va., Portsmouth—Deep Creek Magisterial Dist. No. 2 voted \$60,000 bonds to erect addition to high school. Address Norfolk County School Board. (Lately noted).

W. Va., Elm Grove—Linly Institute Board of Trustees, Dr. Jacob Brittingham, Chrmn., will erect building; 3 stories; Colonial design; 165 ft. long; fireproof; brick and stone; recitation rooms, sleeping accommodations for 112 students, wash rooms, shower baths, assembly room, gymnasium, drill hall, mess hall and kitchen, etc.; Chas. W. Bates, Archt., Natl. Bank of West Virginia, Wheeling.

W. Va., Montgomery—New River State School will erect combination gymnasium and auditorium; \$35,000; 3 stories; 120x94 ft.; seating capacity, 2000; gymnasium, 60x90 ft.

Stores.

Ark., Charleston—C. H. Hiatt and Orr Sherman will erect business building on Main St.; 20x55 ft.

Fla., Bradentown—W. B. Shelby Crichtlow plans to erect 3-story building on Main St.

Fla., Perry—A. Kraemer will erect 2 business buildings; 2 stories.

Ky., Whitesburg—J. D. Fitzpatrick and B. C. Black will erect \$25,000 store and office building on Main St.; contract in 2 weeks.

Ky., Whitesburg—J. A. Holbrook will erect \$10,000 business building; contract at once.

Ky., Whitesburg—Mullins Bros. will erect \$20,000 building; contract at once.

La., Baton Rouge—Sam Schienok will erect \$15,000 building; 2 stories; 21x80 ft.; brick and terra cotta; Wm. T. Nolan, Archt., Canal-Commercial Bldg., New Orleans; bids about Jan. 6.

Md., Baltimore—C. Constantine will erect building, 36th St. and Roland Ave.; 64x105 ft.; brick; 2 stories and basement; slag roof; heating not in general contract; stores on first floor; bids opened Dec. 23; Wight & Lockhart, Archts., Munsey Bldg. (Lately noted).

Mo., St. Louis—Saum Architects, 625 Chestnut St., will erect store and office building, De Baliviere and McPherson Aves.; \$225,000; 145x125 ft.; Tudor Gothic type; terra cotta and matt brick; 12 stores and 30 offices; plans and construction by owner; Albert G. Blanke Real Estate Co. is arranging finances.

Okla., Haskell—Harris Mercantile Co. will erect building.

Tex., Austin—R. E. Warren will erect 3rd-story addition to building, 714 Congress Ave.; also plans to erect another story later.

Tex., Dallas—T. H. Campbell, 1105 E. Jefferson St., will erect \$15,000 store; 1 story; 150x90 ft.; brick; tar and gravel roof; concrete floors and foundation; owner builds. (Lately noted).

Tex., Dallas—Z. E. Marvin will erect building, 1701-03 S. Ervay St., to replace structure lately noted burned; \$80,000; brick veneer.

Tex., Galveston—Clark W. Thompson Department Store, 22nd St. and Avenue E, will erect annex and remodel present structure; \$200,000; addition, 2 stories; reinforced concrete; Joseph Finger, Archt.; fixtures to be installed by Grand Rapids Show Case Co.

W. Va., Martinsburg—Louis Lipsic will erect business building on N. Queen St.; \$20,000; 2 stories; 25x115 ft.; brick; 2 apartments on 2nd floor.

W. Va., Sutton—Holcomb & Holcomb will erect building to replace structure lately noted burned; 59x60 ft.; 2 stories and basement; tile; hardwood floors; concrete foundation; sheet metal roof; metal ceilings; Will Davis, Archt. (See Machinery Wanted-Building Material; Tile; Plate Glass; Metal Ceilings).

W. Va., Martinsburg—M. A. Little will erect \$35,000 building on E. Burke St.; 3 stories; first floor for storerooms; 2nd and 3rd stories for lodge.

BUILDING CONTRACTS AWARDED

Apartment Houses.

N. C., Charlotte—Dr. J. C. Montgomery will erect \$12,000 apartment house, 15 Winfield Pl.; brick veneer; 16 rooms, 4 suites; Southeastern Constr. Co., Contr.

Tenn., Memphis—R. C. Hobson, Frank L. Kerns and others will erect apartment building, Madison Ave. near McNeil St.; \$175,000; site 95x186 ft.; 3 stories and basement; fireproof; reinforced concrete and brick veneer; 28 apartments; Murphy in-door pivot beds; elevators; stairways; incinerators; garages; G. L. Preacher & Co., Atlanta, and Chas. Deas, Memphis, Archts.; Gude & Co., Contrs., Atlanta.

Association and Fraternal.

Ky., Louisville—Louisville Lodge No. 8, B. P. O. E., Kendrick R. Lewis, Chrmn. Bldg. Comm., will erect 8-story and basement building, 3rd and Chestnut Sts.; about \$800,000; 140x180 ft.; concrete and steel skeleton; barber shop and bowling alleys in basement; auditorium, gymnasium, library, social and dining rooms, etc., above; dormitories on top floor; Joseph & Joseph, Archts., Francis Bldg.; Geo. H. Rommel Co., Contr.

Warehouses.

La., New Orleans—Board of Port Commrs., J. H. Walsh, Gen. Mgr., 200 New Court Bldg., will build \$250,000 warehouse at foot of Julia St.

La., New Orleans—Krauss Co., Ltd., 1201 Canal St., will erect 2-story warehouse; \$18,000; 60x100 ft.; brick and mill construction; Favrot & Livaudais, Inc., Archts., Hibernia Bank Bldg.

La., New Orleans—Louisville & Nashville R. R. W. H. Courtenay, Ch. Engr., Louisville, will erect \$500,000 storage warehouse.

Md., Baltimore—Jos. S. Goldsmith, Munsey Bldg., will alter warehouse at Scott and Ridgely Sts., and erect addition; 1 building, 30x150 ft.; 1 story; other building, 50x60 ft.; 4 stories; wood and cement floors; use present foundation; slag roof; Fredk. E. Beall, Archt., 306 St. Paul St.; bids opened.

Miss., Crystal Springs—B. D. Avery will erect brick warehouse on Jackson St.

N. C., Lexington—United Furniture Co., will erect warehouse; 2 stories; 70x100 ft.; 14,000 sq. ft. floor space; also plans improvements to dry kiln.

Tex., Dallas—Dallas Gas Co., will erect building for warehouse, storeroom and garage; 1 story; brick.

Tex., Dallas—Terminal Warehouse Corp., will erect \$5,000,000 warehouse and office building, Commerce and Murphy St.; 5 units; warehouse, 10 stories; office section, 18 stories; L. R. Whitson, Archt., Southwestern Life Bldg. (Previously noted).

Tex., Dallas—Terminal Warehouse Corp. will erect combination office and warehouse building, Commerce St. between Kendall and Poydras Sts.; \$4,500,000 to \$5,000,000; 5 units; office section, 20 stories, 200,000 sq. ft. of floor space; structural steel and reinforced concrete finished with brick and terra cotta; copper roof; 4 elevators; 5 arches for entrances and exits; 4 warehouse units, 10 stories, 1,200,000 sq. ft. of floor space; underground trackage system; permit issued for basement and first floor of building to cost \$300,000; Lloyd R. Whitson and F. Cowderol Dale, Archts. (Previously noted).

Bank and Office.

Fla., Jacksonville—Federal Reserve Bank of Atlanta will erect \$200,000 building; 50x99 ft.; 2 stories and basement; limestone exterior; reinforced concrete; marble and bronze interior finish; Carey roof; concrete floors; low pressure steam heat; metal doors; hollow fireproof tile; A. TenEyck Brown, Archt., Forsyth Bldg., Atlanta; H. C. Dozier, Asso. Archt., Jacksonville; Spiker & Lose, Engrs.; Southern Ferro Concrete Co., Contr.; both Atlanta. (Lately noted).

Miss., Laurel—First National Bank will erect \$125,000 building; 5 stories; \$25,000 vault; Theo. C. Link, Archt., Jackson; Cecil O. Eure, Contr., Hattiesburg. (Lately noted).

S. C., Columbia—Federal Land Bank of Columbia, D. A. Houston, Prest., will erect building, Hampton and Marion Sts.; 2 stories and basement; 75x103 ft.; fireproof and burglar proof vaults; A. TenEyck Brown, Archt., Forsyth Bldg., Atlanta; Northeastern Construction Co., Charlotte, contr. at \$145,000. (Lately noted).

Churches.

Ark., Little Rock—First Baptist Church, Rev. L. M. Sipes, Pastor, will erect building, 1201 Louisiana Ave.; \$50,000; exterior

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finished in stone and stucco; slate roof on steel trusses; auditorium to seat 1200; 3 stories; Sunday school rooms in basement; Wittenberg & Deloney, Archts.; Johnson - Dickerson Co., Contrs. (Lately noted).

City and County.

Fla., Sanford—Library—City will erect library; 1 story and balcony; tile, stuccoed; cement and composition floors; mission tile roof; concrete foundation; F. H. Trimble, Archt.; J. B. Southard, Contr.; both Orlando. (Previously noted).

Courthouses.

W. Va., Pennsboro—Ritchie County will erect courthouse; Foreman & Putnam, Marietta, O., contrs., at \$68,500.

Dwellings.

Fla., St. Petersburg—W. D. McAdoo will erect \$30,000 residence, W. Central Ave.; 20 rooms, including 10 bedrooms and several baths; 130 ft. long; front porch; W. J. Carpenter, Archt.; Holaday & Rountree, Contrs.

Md., Baltimore—Jos. S. Small, Washington Ave., Mt. Washington, will erect 5 dwellings, Appleby Ave. near Falls Rd.; \$15,000; 23.6x24 ft.; 2 stories; frieze; H. Krager, Archt.; construction by owner. (Lately noted).

N. C., Durham—S. P. Mason will erect residence, Dillard and Liberty Sts.; brick; contract let.

N. C., Charlotte—J. B. Myers will erect dwelling, Queens Rd.; \$10,000 to \$15,000; brick veneer; 7 rooms; Thies-Smith Realty Co., Contr.

S. C., Greenville—Duncan Mills will erect 60 dwellings for employees; \$100,000; W. M. Welch, Contr., Greenwood.

S. C., Lockhart—Monarch Mills will erect 100 employees' cottages; William Goldsmith Co., Contr., Greenville.

S. C., Union—Monarch Mills will erect 50 four-room cottages; Bailey Builders' Supply Co., Contrs. (Lately noted).

Tex., Taylor—Herbert Willson will erect 2-story colonial residence; contract let.

Va., Danville—Dr. T. W. Edmunds will erect \$35,000 residence, Greensboro Road near Stokesland; contract let.

Hospitals, Sanitariums, Etc.

Tex., Amarillo—Potter County, R. C. Johnson, Judge Commissioners' Court, will erect main hospital building, brick nurses' home, and frame tubercular cottage; hos-

pital, 3 stories, Y-shape; 35x140 ft.; reinforced concrete faced with brick and tile; concrete foundation; built-up roof; conduit system lights; passenger elevator and dumb waiter; Guy A. Carlender, Archt.; V. E. Ware, El Paso, Contr. at \$145,000, not including heating, plumbing, electrical work, etc. (Lately noted).

Miscellaneous.

Fla., Fort Myers—Exhibition Building—County Commrs. will erect circular exhibition building for Lee County Fair; 1200 ft. long; brick; slate surfaced shingle roof; J. R. Stewart, contr. at \$16,600.

Fla., Hialeah—Clubhouse—Curtis-Bright Ranch Co. will erect \$20,000 clubhouse; Moorish design; tile and concrete; lockers, lounge rooms, etc.; Wade & Sons, Contrs., Coconut Grove.

Mo., St. Louis—Clubhouse—City Club, Geo. B. Logan, Prest. Board of Education Bldg., will erect clubhouse, 11th and Locust Sts.; \$1,000,000; 15 stories; Gothic type; 105 bedrooms, 12 private dining rooms, also dining room on top floor, lounging room, 47x71 ft.; banquet rooms, clubrooms, auditorium to seat 1200, library, etc.; T. P. Barnett Co., Archt.; Humes-Deal Co., Contr. (Previously noted).

Va., Charlottesville—Clubhouse—Blue Ridge Club will erect addition and remodel building on E. Market St.; brick; hardwood floors; hot water heat and plumbing; contract let.

Schools.

Md., Baltimore—Board of Awards, Mayor Wm. F. Broening, Prest., will erect elementary school at Central Ave. and Lexington St.; \$455,978; 3 stories, basement and play roof space; 100x270 ft.; 24 classrooms; brick and hollow fireproof tile; concrete foundation and floors; limestone trim; interior tile; steel trusses; tile roof; metal doors; ornamental terra cotta; steel sash and trim; wire glass; Buckler & Fenhagen, Archts., Henry Massart, Engr., both 325 N. Charles St.; Henry Adams, Engr., Calvert Bldg.; Chas. L. Stockhausen Co., Contr., Gay and Water Sts. (Lately noted).

Mo., Lilbourn—School Board will erect \$15,000 building; Lindsay Architectural Co., Archt., Sikeston; Jno. J. Miller, Contr., Illinois.

N. C., Charlotte—County Board of Education will erect Sardis-Carmel School; \$19,500; brick; 6 rooms and auditorium; R. N. Hunter, Contr. (Previously noted).

N. C., Newton—School Board, F. E. Garvin, Chrm., will erect \$73,000 high school; 19 classrooms, auditorium, gymnasium to seat

750, library 40x60 ft., music room, laboratories, domestic science, home economics, manual training departments, etc.; semi-fireproof; direct-indirect system of heating; modulating system of ventilation; Benton & Benton, Archts., Wilson; J. J. Stroud, Contr., Southern Pines; Fayetteville Plumbing Co., Fayetteville, heating and plumbing, \$16,064; Walker Electric Co., Raleigh, wiring. (Lately noted.)

N. C., Winston-Salem—City, Jas. G. Hanes, Mayor, will erect Central Salem and Southside graded schools; former, 2 stories; 100x160 ft.; C. R. Faw, Archt., Winston-Salem; latter, 1 story; 200x116 ft.; Harold Macklin, Archt., Winston-Salem; hollow fireproof tile; wood and concrete floors; concrete foundations; tile roof; metal laths; ventilators; Southeastern Construction Co., Charlotte, contr., at \$147,500 or \$151,200 if 2 additional rooms are added to Southside building; L. B. Brickenstein, Winston-Salem, plumbing, \$14,100; Chas. M. Crawford, Supt. of building construction. (Lately noted).

Okl., Luther—Board of Education, A. M. McClure, Clk., will erect gymnasium and auditorium; \$13,000; 1 story; 80x90 ft.; brick; Hawk & Parr, Archts., Magnolia Bldg., Oklahoma City; Cowen Bros., Contrs., Shawnee. (Previously noted).

W. Va., Montgomery—State Board of Control, Jas. B. Lakin, Prest., Charleston, will erect combination gymnasium and auditorium for New River State School; \$35,000 steel and brick; 94x122 ft.; 3 stories; hardwood and concrete floors; concrete foundation; built-up roof; steel and sash trim; C. H. Martin, Archt.; W. H. Coley, Contr.; both Montgomery; material purchased. (Lately noted).

Stores.

Fla., West Palm Beach—J. Schupler will erect \$25,000 store, Clematis Ave. near Rosemary St.; 50x90 ft.; E. H. Barto, Contr.

Tenn., Memphis—Frank F. Hill will erect \$75,000 building, Madison Ave. and 3rd St.; 2 stories; reinforced concrete and brick; steel trussed roof; terra cotta trim; terrazzo corridors; red gum interior finish; steam heat; first floor for 7 stores; second, offices; Harker & Cairns, Archts.; E. J. Pearson, Contr.

Tenn., Trezevant—W. J. & I. L. Argo have contract to erect 2 brick stores on W. Main St.

W. Va., Roncoveert—W. H. Felix will erect building to be occupied by Plumley-Hulme Co.; 25x80 ft.; R. L. Wright, Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Alloy for Thermostatic Instruments.—F. H. Broyhill, Box X, Hopewell, Va.—To purchase alloy material for thermostatic instruments; material desired is metal (bimetallic) with one side steel and the other side brazed or welded together so that the varying temperature will cause the metallic strip to vary to and fro.

Alternator.—Standard Electric Machinery Co., (Mchy. Dealers), 7 E. Hill St., Baltimore, Md.—100 to 125 KVA. 3 phase, 60 cycle, 240 volt alternator direct connected to horizontal condensing engine, steam pressure 175 lbs., total temperature 480 degrees F. with exciter and switchboard; will consider alternate on turbine unit.

Beam Hangers.—See Building Materials.

Boiler.—Lynchburg Lumber Mfg. Co., Lynchburg, Va.—To purchase high grade, second-hand boiler from 100 to 110 H. P.

Boilers (Fire Box).—H. W. Dexter (Mchy. Dealers), Box 665, Jacksonville, Fla.—Three 25 or 30 H. P. fire box boilers on wheels; second-hand equipment.

Boilers.—Hackley Morrison Co., Inc., (Mchy. Dealers), 1708 Lewis St., Richmond, Va.—Two 150 H. P. HRT, boilers, 150 lbs. A. S. M. E. with or without dutch oven fixtures, new or slightly used.

Bricks (Common).—George W. Ragan, Gastonia, N. C.—Prices on 400,000 common brick, suitable for mill construction building.

Bridge Construction.—Duval County Commrs., Frank Brown, Clk., Jacksonville, Fla.—Bids until Jan. 10 for 2 bridges, creosoted material, as follows: Over Julington Creek and Gardener Branch; plans, etc., on file. (Lately noted).

Bridge Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 26 to construct 4 reinforced concrete and steel bridges on state roads as follows: Cass County, Pleasant Hill to Strassburg, S. A. Proj. No. 20,174; Dade County, Greenfield to Stockton, F. A. Proj. No. 213; DeKalb County, Maysville westward, S. A. Proj. No. 20,203; Stone County, Crane to Galena, F. A. Proj. No. 161-B.

Bridge Construction.—City, A. J. Bell, Supervisor, Greenwood, S. C.—Bids until Jan. 4 for bridge across Turkey Creek, between Span Shoals and H. L. Rasor's residence; plans, etc. on file.

Bridge Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 27 to construct 8 reinforced concrete and steel bridges on state roads as follows: John-

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son County, Warrensburg to Clinton, S. A. Proj. No. 20,200; Madison County, Ironton to Fredericktown, F. A. Proj. No. 203-A; Newton County, Granby to Monett, F. A. Proj. No. 155; Christian County, Ozark to Springfield, F. A. Proj. No. 36.

Bridge Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 28 to construct 24 reinforced concrete and steel bridges on state roads as follows: Callaway County, Fulton to Calwood, S. A. Proj. No. 20,227; Dunklin County, Kennett to Cardwell, F. A. Projects Nos. 209-B and C.; Dunklin County, Kennett to Poplar Bluff, F. A. Projects Nos. 221 and 221-A; Dunklin County, Kennett to Hayti, F. A. Proj. No. 212; Jasper County, Springfield to Carthage, F. A. Proj. No. 84; Platte County, Kansas City to Parkville, F. A. Proj. No. 48; Platte County, Kansas City to St. Joseph, F. A. Proj. No. 93.

Bridge Const., etc.—Adams County Commrs., Frank V. Elsele, Clk., Natchez, Miss.—Bids until Jan. 1 to construct bridges over Veal's Creek on Garden City road; plans, etc., on file.

Bridge Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 23 for 7 reinforced concrete and steel bridges on state roads as follows: Buchanan County, St. Joseph to Chillicothe; Butler County, Poplar Bluff to Elsinoire, F. A. Proj. No. 207; Ripley County, Doniphan to Poplar Bluff, F. A. Proj. No. 208; Vernon County, Nevada to El Dorado Springs, F. A. Proj. No. 224.

Bridge Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 22 for 22 reinforced concrete bridges on state roads as follows: Iron County, Ironton to Salem, F. A. Proj. No. 193; Phelps County, Rolla to Houston, F. A. Proj. No. 110; Macon County, Moberly to Centralia, F. A. Proj. No. 44-B; Cedar County, Eldorado Springs to Springfield, F. A. Proj. No. 192; Cedar County, Osceola to El Dorado Springs, F. A. Proj. No. 215; Gentry County, Stanberry to Albany, F. A. Projects Nos. 3785, 37-B; Audrain County, Moberly to Centralia, F. A. Proj. No. 194.

Brick Making Machine.—Loncala Phosphate Co., Box 471, Ocala, Fla.—To correspond with mfrs. of brick making machine, operated by hand power or small gasoline motor.

Building Materials.—George W. Ragan, Gastonia, N. C.—Data and prices on building materials including steel sash, ribbed and plain glass; maple flooring; cast iron columns; sills column caps; beam hangers; mill timbers of long leaf pine; heavy flooring.

Building Material.—Holcomb & Holcomb, Sutton, W. Va.—Hollow fireproof tile, hardwood flooring, plate glass, metal ceilings; carload of timber including dimensions of 2x10, 2x6, 2x8 and 2x4; sheet metal and beams.

Building Material.—M. A. Long Co., Horn Bldg., Guilford Ave. and Fayette St., Baltimore, Md., is estimating on erection of store building, 36th St. and Roland Ave., 2 stories and basement, 64x105 ft., and desires bids on sub-contracts and estimates until Dec. 22.

Building (Steel).—Hackley Morrison Co., Inc. (Mchy. Dealers), 1708 Lewis St., Richmond, Va.—200x300 ft. truscon steel building.

Builders Supplies.—Farmers' Hardware Co., John F. McLean, Red Springs, N. C.—To correspond with dealers in lime, cement, cedar shingles, etc.

Buttons, etc.—Moore Bros., Lapeer, Mich.—To purchase supplies for mfrs. of buttons, fancy ornaments, etc.

Cars (Street).—City of Radford, Va., C. H. Tyler, Supt.—Prices and specifications of light weight, safety street cars, equipped for double end control.

Cars (Logging), etc.—Hackley Morrison Co., Inc. (Mchy. Dealers), 1708 Lewis St., Richmond, Va.—20 standard gauge heavy logging cars with trucks for same.

Churn and Butter Worker.—John L. Smith Spartanburg, S. C., R-2.—New or second-hand No. 2 Victor churn and butter worker combined.

Clearing Right of Way.—Fayette and Lamar County Drainage Dist. No. 1, Commrs., Fayette, Ala.—Bids until Jan. 18 for clearing right of way of the main canal of Fayette and Lamar County Drainage dist. No. 1; Wm. M. Suddith, Chrmn.

Compressor.—R. L. Shuford Farm, Newton, N. C.—To purchase 6 to 10 ton enclosed type compressor.

Drainage.—Cochran County Drainage Commrs., Clarksdale, Miss.—Bids until Jan. 3 to construct about 17 mi. lateral and clean and deepen 3 mi. lateral ditches in Hopson Bayou Drainage Dist., Sub-Drainage Dist. No. 1, total yardage 185,000; Southern Engineering Co., Engrs., Clarksdale.

Drainage.—Deeson Drainage Dist. Commrs. of Bolivar County, Cleveland, Miss.—Bids until Jan. 4 for excavation of approx. 55,000 cu. yds. of earth, cleaning 5 mi. main channel between stations 143 and 424; W. W. Boone, Engr.

Dredging.—U. S. Engr. Office, Norfolk, Va.—Bids until Jan. 15 for dredging in Appomattox River, Va.

Engines.—Hackley Morrison Co., Inc. (Mchy. Dealers), 1708 Lewis St., Richmond, Va.—150 H. P. center crank enclosed, self-oiling automatic steam engine for belt drive, used equipment, also 250 H. P. Corliss engine.

Engine (Hoisting).—H. W. Dexter (Mchy. Dealers), Box 665, Jacksonville, Fla.—30 or 40 H. P., 3 drum skeleton hoisting engine; second-hand equipment.

Fans (Electric).—Duncan Machinery Co. (Mchy. Dealers), Box 265, Knoxville, Tenn.—Jobbers prices on 8-in. electric fans, suitable for ventilating purposes, in lots of 100 or more.

Flooring.—See Building Materials.

Flooring (Hardwood).—Quality Builders, Inc., 307 Commerce Bldg., Kansas City, Mo. 100,000 ft. of 13/16 hardwood flooring.

Glass.—See Building Materials.

Hammer.—Broadfoot Iron Works, Wilmington, N. C.—One 300 or 400-lb. Bradley Helve type hammer; used one preferred.

Janitor Supplies (Schools).—Board of Awards, Richard Gwinn, City Register, Baltimore, Md.—Bids until Jan. 3 for janitor supplies for department of education; John H. Roche, Secy., Board of School Commrs.

Kerosene.—Panama Canal, A. L. Flint, General Purchasing Office, Washington, D. C.—Bids until Jan. 8 to furnish kerosene in drums. Blanks and information (Circular 1507) obtainable from Panama Canal; Asst. Purchasing Agts. at 24 State St., New York, 611 Gravier St., New Orleans, La.; U. S. Engr. offices throughout the country.

Lime and Cement.—George W. Ragan, Gastonia, N. C.—Data and prices on lime and cement.

Locomotive.—See Saw-mill and Logging Equipment.

Lock Operating Machinery.—U. S. Engr. Office, Huntington, W. Va.—Bids until Jan. 23 to furnish and deliver lock-operating mchy., etc. for dam No. 30, Ohio river.

Lumber.—See Building Materials.

Mica Machinery (Grinding and Punching).—W. W. Hendrix, Box 60, Raleigh, N. C.—To correspond with mfrs. of mica grinding and punching mchy.

Mining Machinery.—Carlos H. Given, Mgr., Spring Lick, Ky.—Prices on general mining mchy.

Metal Ceilings.—Holcomb & Holcomb, Sutton, W. Va.—See Building Material.

Meter (Water), etc.—Board of Awards, Richard Gwinn, City Register, Baltimore, Md.—Bids until Jan. 3 to furnish and deliver f. o. b. Baltimore, one 48-in. Venturi meter and two special registers to the Water Dept. Wm. A. Megraw, Water Engr.

Milking Machine.—John L. Smith, Spartanburg, S. C., R-2.—New or second-hand DeLaval milking machine.

Motors (Electric).—John L. Smith, Spartanburg, S. C., R-2.—To purchase three electric motors, 1, 2, 3, or 5 H. P.; new or second-hand.

Paint.—Port Commrs., Suite 200, New Courthouse Bldg., New Orleans, La.—Bids until Dec. 28 to furnish 2500 gals. olive green paint and 2500 gals. yellow paint as per Dock Bd. specifications.

Pasteurizer.—John L. Smith, Spartanburg, S. C., R-2.—New or second-hand 100 gal. pasteurizer.

Paving.—City, W. O. Crisman, Engr., Selma, Ala.—Bids until Dec. 29 for concrete sidewalks on Young St. from River to Lamar Aves. (Improvement Ordinance No. 126); plans, etc., on file.

Paving and Sewer Construction.—Paving, City, P. A. Poag, Secy., Monroe, La.—Bids opened Dec. 27 to pave 7 streets as follows: Grand St. from Jefferson to southern city limits, 48,000 sq. yds. sheet asphalt, 24,000 lin. ft. concrete curb and gutter; 4000 lin. ft. concrete gutter; DeSiard St. from Ouachita River to eastern corporate limits, 36,600 sq. yds. sheet asphalt, 16,800 lin. ft. concrete curb gutter, 3800 lin. ft. concrete gutter; Arkansas Ave. from Walnut to 6th Sts.; 4300 cu. yds. asphaltic concrete, 3600 lin. ft. concrete curb and gutter; Brese Ave., from Front to 6th Sts., 5000 sq. yds. asphaltic concrete, 4300 lin. ft. concrete curb and gutter; Alexandria Ave. (Roselawn Place), from 1st to 3rd Sts., 1700 sq. yds. asphaltic concrete, 1400 lin. ft. concrete curb and gutter; Miro St. from Grand to Jackson, 1400 sq. yds. asphaltic concrete, 1200 lin. ft. concrete curb and gutter; Forsythe Park, 4000 sq. yds. asphaltic concrete; construct 15 to 36-ft. storm sewers, 22 manholes, inlets, etc.; plans, etc., from City Engr.

Paving and Water Works.—City of Zephyrhills, Fla., F. E. Tomlinson, Mayor—Bids until Jan. 30 for furnishing material, equipment and labor and constructing the following: Paving improvements, 7000 yds. paving and gutters, also necessary grading, curbing, gutters and drainage structures and appurtenances; bids will be received on sheet asphalt, asphaltic concrete, vitrified brick, cement concrete and similar permanent pavements. Water Works Improvements—200 tons of cast iron pipe and specials; 25 fire hydrants; 16 6 and 8-in. gate valves and boxes; 10,000 ft. galvanized pipe; one 75,000 gal. tank on 110 ft. tower; two centrifugal pumps driven by internal combustion engines; also, laying pipe, constructing pumping station building and erecting machinery; one deep well; after Jan. 10th plans and specifications on file at office of City Clerk or office of E. V. Camp and Associates, Consult. and Supervising Engrs., Moreland and DeKalb Aves., Atlanta, Ga.

Plans (Architectural).—Chamber of Com-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

mecca, Chester O. Harris, Secy., Ashokle, N. C.—To correspond with Architects who would submit plans for construction of \$20,000 or \$30,000 hotel building.

Pipe, Pumps, etc.—South Point Oil Co., 1018 1st National Bank, Huntington, W. Va.—Prices on 13 mi. 2½ or 3 in. wrought iron pipe, pumps, etc.

Plate Glass.—Holcomb & Holcomb, Sutton, W. Va.—See Building Material.

Press (Hydraulic Wheel).—H. W. Dexter (Mchy Dealers), Box 665, Jacksonville, Fla.—Hydraulic wheel press for car wheels.

Pulp and Paper Equipment.—Geo. F. McFady, 309 Broadway, New York—Equipment to increase capacity of Kraft pulp and paper plant at Moss Point, Miss., from 50 to 100 tons per day.

Pumps—See Pipes, Pump, etc.

Rails (Relaying).—See Saw-mill and Logging Equipment.

Rigs (Drilling).—South Point Oil Co., 1018 1st National Bank, Huntington, W. Va.—Prices on 6 drilling rigs—Star No. 25.

Road Building Equipment.—Dade County Commrs., Ben Shepard, Miami, Fla.—Bids opened Dec. 29 for following road equipment: Revolving steam shovel, caterpillar type, ½, ¾ and ¾ yd. buckets; 10 ton gasoline roller, 3 wheel type with scarifier attached; two 2-ton worm drive trucks, solid tires, prices on both dump and stationary bodies.

Road Construction.—Palm Beach County Commrs., Hector Harris, Chrmn., West Palm Beach, Fla.—Bids until Dec. 30 for 1 mi. hard surfaced road from bridge across South End of Lake Boca Ratone to Broward County line; plans, etc., from County Engr.

Road Construction.—Henrico County, A. H. Pettigrew, Clk., Richmond, Va.—Bids until Jan. 2 for 6.6 mi. penetration macadam or concrete road between Richmond and Seven Pines; R. D. Bryant, State Highway Engr. (Lately noted).

Road Construction.—Fannin County, A. P. Bolding, County Judge, Bonham, Tex.—Bids until Dec. 30 for improving S. H. No. 5, Honey Grove Road Dist.; plans from County Engr., Honey Grove, Tex.

Road Construction.—Briscoe County, L. B. Richards, County Judge, Silverton, Tex.—Bids opened Dec. 22 for 22.57 mi. S. H. No. 5-A, Road Dist. No. 7; 6948 cu. yds. gravel and 8336 cu. yds. caliche surfacing; 61,005 lbs. reinforcing steel; M. E. Worrell, care of Midwest Engineering Co., County Engr. (Lately noted).

Road Construction.—Calhoun County Commrs., Court, W. H. Hanna, Prest., Aniston, Ala.—Bids until Jan. 12 to chert surface 1½ mi. Piedmont-Cedartown road from Terrapin Creek west.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 22 to grade, construct drainage structures, etc. on 17 roads as follows: Gundry County, 554 mi. road from Trenton northward, F. A. Proj. No. 108; Gundry County, .912 mi. road from Trenton westward, F. A. Proj. No. 116-A; Gundry County, .468 mi. road from Trenton eastward, F. A. Proj. No. 116-B; Gentry County, 1.890 mi. road from Stanberry eastward, gravel surface, F. A. Proj. No. 37-B; Gentry County, 4.50 mi. road from Albany westward, gravel surfacing, F. A. Proj. No. 57-B; Randolph County, 1.982 mi. road from Clifton Hill westward to Clinton County line, F. A. Proj. No. 44-B; Randolph County, 1.363 mi. road from Clark northward, S. A. Proj. No. 20,140; Phelps County, 4.196 mi. road from Rolla southward, F. A. Proj. No. 110-A; Phelps County, 7.195 mi. road from Newburg southward, S. A. Proj. No. 20,216; Taney County, 4.151 mi. road from

Kirbyville to Mildred, F. A. Proj. No. 189; Taney County, 4.084 mi. road from Kirbyville to Branson, F. A. Proj. No. 191; Audrain County, .189 mi. road from Boone County line eastward, F. A. Proj. No. 194; Cedar County, Stockton, eastward and westward, Federal Aid Project No. 192; Howell County, 16,700 mi. road from Westplains eastward, gravel surfacing, Federal Aid Project No. 138; Henry County, 6.6 mi. road from Clinton northward, chats surfacing, F. A. Proj. No. 127; Iron County, 7.197 mi. road from Bellevue westward, gravel surface, F. A. Proj. No. 193-A; Stoddard County, 7.723 mi. road from Dexter southward, gravel pavement, S. A. Proj. No. 211-A.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 23 to grade, construct drainage structures, etc. on 12 roads as follows: Oregon County, 2.534 mi. road from Koshkonong northward, gravel, S. A. Proj. No. 20,226; Stone County, .530 mi. road from Crane to Galena, gravel, F. A. Proj. No. 161; Butler County, 19.791 mi. road from Poplar Bluff to Carter County line, gravel pavement, F. A. Proj. No. 207; Saline County, 8.220 mi. road from Marshall eastward and westward, asphalt macadam surfacing, F. A. Proj. No. 16; Warren County, 1.218 mi. road from Warren southward, gravel pavement, S. A. Proj. No. 20,221; Ralls County, 5.498 mi. road from New London northward, southward and southward, gravel pavement, S. A. Proj. No. 20,268; Ripley County, 2.702 mi. road from Doniphan northward, gravel, F. A. Proj. No. 201; Ripley County, 11.900 mi. road from Doniphan, Grandin to Jefferson City, gravel, F. A. Proj. No. 200; Ripley County, 4.700 mi. road from Doniphan eastward, F. A. Proj. No. 206; Ripley County, 5.1 mi. road from Doniphan eastward, F. A. Proj. No. 216; Buchanan County, 8.918 mi. road from St. Joseph to De Kalb County line, concrete, F. A. Proj. No. 205-A; Vernon County, .558 mi. road from Nevada to El Dorado Springs, F. A. Proj. No. 224.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 28 to grade, construct drainage structures, etc. on 11 roads as follows: Barry County, 4.571 mi. road from Cassville northward, F. A. Proj. No. 151; Callaway County, 4 mi. road from Fulton northeastward, gravel-macadam, F. A. Proj. No. 144; Callaway County, 8 mi. road from New Bloomfield northward, gravel, F. A. Proj. No. 97; Callaway County, .500 mi. road from Fulton eastward, S. A. Proj. No. 20,227; Dunklin County, 23 mi. road from Kennett southward, gravel and concrete, F. A. Proj. No. 209-A; Dunklin County, 18 mi. road from Holcomb northward, F. A. Proj. No. 221; Dunklin County, 7 mi. road from Kennett eastward and westward, concrete and gravel, S. A. Proj. No. 212; Jasper County, 6.6 mi. road from Carthage northeastward, concrete, F. A. Proj. No. 84; Pemiscot County, 1.412 mi. road from Hayti to Caruthersville, gravel, S. A. Proj. No. 20,224; Platte County, 4.703 mi. road from Parkville southward, F. A. Proj. No. 48-B; Platte County, 1.010 mi. road from Platte City westward, F. A. Proj. No. 93.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 27 to grade, construct drainage structures, etc. on 6 roads as follows: Christian County, 200-ft. road from Ozark northward, F. A. Proj. No. 36; Johnson County, 1.748 mi. road from Warrensburg southward, S. A. Proj. No. 20,200; Lincoln County, 1.046 mi. road from Troy to Winfield, gravel, S. A. Proj. No. 20, 69-B; Madison County, 13.813 mi. road from Fredericktown westward, F. A. Proj. No. 203-A; Newton County, 4.620 mi. road from Granby eastward, gravel, F.

A. Proj. No. 155; Texas County, 11.100 mi. road from Houston southward, F. A. Proj. No. 90-C.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids opened Dec. 20 to grade, construct drainage structures, etc. on 5 roads as follows: Bollinger County, 16.4 mi. road from Patton to Marble Hill, gravel, F. A. Proj. No. 202; Bollinger County, 16 mi. road from Marble Hill southward, gravel, F. A. Proj. No. 208; Marion County, 2.433 mi. road from Ely to West Ely, gravel, S. A. Proj. No. 20,188; Dade County, 5.500 mi. road from Greenfield northward, F. A. Proj. No. 213-A; Dent County, 2.12 mi. road from Salem southwestward, S. A. Proj. No. 20,205.

Rock.—Supt. of Lighthouses, New Orleans, La.—Bids until Jan. 18 to furnish f. o. b. cars, approx. 1800 tons rough quarried rock; placing approx. 1800 tons of rock protection around Sand Island Light Station, Ala.; loading, transporting and placing around same station 1800 tons rock furnished by the Government; separate proposals for each item of service.

Roofing (Steel), etc.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Jan. 3 to furnish 4400 sheets of corrugated roofing; 2000 lbs. nails and washers for same and 1500 ft. ridge roll; delivery to Depot Quartermaster, U. S. M. C., Hampton Roads, Va.; Sch. No. 228.

Roller (Road).—H. W. Dexter, (Mchy. Dealers), Box 665, Jacksonville, Fla.—Gasoline operated, 7-ton tandem road roller; second-hand equipment.

Rollers (Road).—Esio Garibaldi, 20 Capuchinas 48, Mexico, D. F., Box 106-BIS.—Data on road rollers, covering diam., width and total weight of machine; spec. on using crude oil, soft coal and gasoline motor equipment; state date of delivery and prices f. o. b.

Rollers (Steam, Road).—C. D. Blair, Box 714, Max Meadows, Va.—New or second-hand steam road rollers.

Sash (Steel).—See Building Materials.

Saw-mill and Logging Equipment.—B. M. Carr & Son, Hardwood Dept., Shorters, Ala., R. F. D. 1.—Prices on 2 mi. of 35 lb. to 40 lb. relay rails; purchase or rent 10 to 15 ton Shay geared locomotive for logging heavy hardwood; second-hand 2 saw lumber trimmer, and small log (ground) skidder.

Separator (Milk).—John L. Smith, Spartanburg, S. C., R-2.—New or second-hand DeLaval No. 19 electric separator.

Sewers.—City of Richmond, Va., Chas. E. Bollinger, City Engr.—Bids until Jan. 16 for building reinforced concrete, precast concrete segment block, brick and vitrified pipe sewers at various places within city limits; approx. cost \$700,000; Allen J. Saville, Director of Public Works.

Sewer Construction.—District Commrs., Room 50, District Bldg., Washington, D. C. Bids until Jan. 15 to construct about 600 ft. of sewers; for information apply to: Room 427.

Sprinklers (Road).—C. D. Blair, Box 714, Max Meadows, Va.—New or second-hand road sprinklers.

Sprinkler System.—Hackley Morrison Co., Inc., (Mchy. Dealers), 1708 Lewis St., Richmond, Va.—Sprinkler system for 200x300-ft. building.

Steel (Structural).—Port Commrs., Suite 200, New Orleans Court Bldg., New Orleans, La.—Bids until Jan. 11 to furnish, erect and paint structural steel required for Market St. shed; for spec. apply to Supvrs. of Purchases, 1 Canal St.

Tank and Tower (Steel).—Hackley Morris-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

son Co., Inc. (Mchy. Dealers), 1708 Lewis St., Richmond, Va.—50,000 gal. steel tank on 60 to 100 ft. steel tower.

Tile.—Holcomb & Holcomb, Sutton, W. Va.—See Building Material.

Tubes (Celluloid).—Mucine Products Co., 4010 Montrose Ave., Chicago, Ill.—To correspond with mf're of celluloid tubes.

Undershirts (Cotton).—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Jan. 2 to furnish 100,000 cotton undershirts; delivery to U. S. M. C., Philadelphia, Pa.; Sch. No. 227.

Wiring and Electric Lighting.—Board of Awards; Richard Gwinn, City Register, Baltimore, Md.—Bids until Jan. 3 for alterations and additions to wiring and electric lighting, system in main building of Bay View Asylum; J. F. Crowther, Inspector of Bldgs.

Whips (Buggy) Machinery.—Moore Bros., Lapeer, Mich.—To purchase mchy for mf're. of buggy whips.

Financial News

New Financial Corporations.

Ark., El Dorado—The First National Bank of Smackover, capital \$25,000, Sid Umsted, J. E. Murphy, Hugh McKenzie and others interested.

Fla., Miami—Vanderpool & Co., capital \$10,000, inceptd. with Fred. W. Vanderpool, Prest.; J. M. Davidson, Vice. Prest.

Fla., Tampa—Florida Mortgage, Title and Bonding Co., capital \$2,500.00, inceptd. with Charles H. Brown, Prest.

Ga., Augusta—The Realty Savings & Trust Co., capital \$50,000, inceptd. with J. Lee Etheridge, Prest.; J. Frank Carswell, Vice-Prest.

Ky., Frankford—Farmers' Bank and Trust Co., capital \$30,000, inceptd. by Jas. A. Wallace, Dr. T. Wallace, A. M. Clark and others.

Ky., Princeton—Princeton Building and Loan Assn., capital \$150,000, inceptd. by John C. Gates, A. S. Neel, Guy S. Dunning and others.

La., Crowley—Crowley Bank and Trust Co., will change name to Crowley Trust and Savings Bank and increase capital to \$100,000.

Md., Baltimore—The Invincible Building and Loan Assn., capital \$520,000, inceptd. with Claude B. Doing, Prest.; Peter Reichardt, Vice-Prest. Officers address: Park Bank Building, Lexington and Liberty Sts.

Miss., Ripley—Merchants and Farmers' Bank, capital \$25,000, organized.

Mo., Joplin—Citizens Loan & Investment Co., capital \$50,000, inceptd. with John W. Bung, Prest.; J. H. George, Vice-Prest. both of Springfield and Walter N. George, Joplin.

Okla., Tulsa—Planters & Mechanics Bank, capital \$100,000, inceptd. with G. N. Wright, Prest.; C. C. Roberts, Vice-Prest.

S. C., Highlands—The Highlands Bank, capital \$15,000, inceptd. by S. T. Pierson and others.

W. Va., Charleston—Charleston Home Insurance Agency, capital \$25,000 inceptd. by H. C. Denisher, G. S. Wiesling, A. E. Calendar.

W. Va., Greenbrier—The Greenbrier Joint Stock Land Bank, Lewisburg, capital \$275,000, inceptd. with H. W. Comstock, Prest.; W. E. Nelson, Vice-Prest.

New Securities.

Ala., Heflin—Funding—Cleburne County will vote Jan. 9 on \$115,000 bonds. Address County Commrs. (Lately noted).

Ark., Fort Smith—Water—City, Fagan Bourland, Chrmn., sold \$1,329,000, 5%, \$1000 denom. bonds to the Mercantile Trust Co. of St. Louis and the City National Bank, Fort Smith. (Lately noted).

Fla., Clearwater—Road—Pinellas County contemplates voting on bonds. Address County Commrs.

Fla., De Land—Road—Volusia County, New Smyrna Road and Bridge Dist., voted \$600,000 bonds. (Lately noted).

Fla., Key West—Municipal—City will vote on \$115,000 bonds. Address The Mayor.

Fla., Orlando—Road—Orange County sold \$528,000, 5% bonds to Spitzer Rorick & Co., Toledo. Address County Commrs.

Fla., Umatilla—Street, Water and Sewer—Town Clk; opens bids for \$40,000, 6%, \$1000 denom. bonds.

Ga., Bainbridge—School—Town will receive bids for \$25,000 bonds. Address The Mayor.

Ga., Cave Spring—School—Cave Springs Consolidated School Dist. sold \$10,000, 5½% bonds. Address School Board. (Lately noted).

Ga., East Point—School, Water and Sewer—City voted \$150,000 bonds. Address The Mayor.

Ga., Morven—Water—City will vote Jan. 13 on \$8000, \$500 denom. bonds. Address The Mayor.

Ky., Greenup—Road and Bridge—Greenup County Commrs. sold \$25,000, 5% bonds to Weil Roth & Co., Cincinnati. (Lately noted).

Ky., Winchester—Road—Clark County has voted \$92,000 bonds. Address County Commrs.

La., Bunkie—Improvement—The Merchants' and Planters' Bank and the Citizens' Bank and Trust Co., both of Bunkie, purchased \$100,000 bonds.

La., Homer—Sewer—City sold \$120,000 bonds to W. L. Slayton & Co., Toledo. Address The Mayor. (Lately noted).

La., Rayville—Sewer—Town, W. W. Kelly, City Clk. sold \$50,000, 6% bonds to M. W. Elkins & Co., Little Rock, Ark., at par and premium of \$1250.

Md., Towson—Road and Bridge—Baltimore County, John R. Haut, Clk., will receive bids until Jan. 23 for \$750,000 bonds.

Miss., Canton—School—City sold \$125,000 bonds to Canton Banks. Address The Mayor.

Miss., Gulfport—School—City will vote Jan. 6 on \$175,000 bonds. Address Bd. of School Trustees.

Mo., Jackson—Drainage—Jackson Township Drainage Dist. sold \$98,000, 5%, \$1000 denom. bonds to Lewis W. Thomson & Co., Inc. of St. Louis.

Mo., Kansas City—First Mortgage—The Guaranty Trust Co., purchased \$850,000, 6%, bonds of North Missouri Power Co.

Mo., Lee's Summit—School—Lee's Summit voted \$95,000 bonds. Address The Mayor.

Mo., Lexington—Bridge Approaches—City voted \$180,000 bonds. Address The Mayor.

Mo., Marshall—School—City voted \$200,000 bonds. Address The Mayor.

Mo., Mountain Grove—Water—Town voted \$15,000 bonds. Address The Mayor. (Lately noted).

Mo., Nevada—School—City voted \$320,000

bonds. Address The Mayor.

Mo., Paynesville—School—Paynesville Consolidated School Dist. voted \$12,000 bonds. Address School Dist. Trustees.

Mo., Purdy—Light—City voted \$12,000 bonds. Address The Mayor.

N. C., Boone—Street—City sold \$14,000, 6% bonds to the Watauga County Bank at par. Address The Mayor.

N. C., Mineral Springs—School—Town sold \$75,000, 6% bonds to Bumpus-Hull & Co., Detroit. Address The Mayor.

N. C., Selby—Street—City sold \$125,000 bonds to the First National Bank of Selby. Address The Mayor.

N. C., Smithfield—School—Johnston County, W. G. Wilson, Chrmn. of Bd. of Education will receive bids until Jan. 3 for \$37,500 6%, \$500 denom. bonds.

N. C., Swannanoa—School—County Bd. of Education sold 6% bonds to Bray Brothers of Greensboro.

N. C., Walnut Gove—School—Walnut Cove Special School Tax Dist. will vote Jan. 16 on \$15,000, 6% bonds. Address Clerk, Board of County Commrs.

N. C., Tarboro—School—Bd. of Education will receive bids until Jan. 18 for \$25,000, 6%, \$1000 denom. bonds.

Okla., Guthrie—Water and Sewer—City voted \$80,000 bonds. Address The Mayor.

Okla., Woodward—Water—City sold \$175,000 bonds to the First Municipal Bond and Mortgage Co., Dallas and the Liberty Central Trust Co., St. Louis. Address The Mayor.

Okla., Woodward—Water—City voted \$175,000 bonds. Address The Mayor.

S. C., Union—Street—City, W. D. Arthur, Clk., will receive bids until Jan. 9 for \$150,000, 5% bonds. (Lately noted).

Tenn., Ripley—Street and Sewer—City will vote Jan. 18 on \$100,000 bonds. Address The Mayor.

Tex., Bay City—Road—Matagorda County will receive bids until Jan. 8 for \$110,000 bonds. Address County Judge.

Tex., Bellville—Road and Bridge—Austin County, Wallis Road Dist., plans voting on \$100,000 bonds. Address County Commrs.

Tex., Columbus—Road—Colorado County will vote Jan. 27 on \$100,000 bonds; B. H. Faber, County Engr.

Tex., Denton—School—City will vote Jan. 13 on \$65,000 bonds. Address The Mayor.

Tex., Galveston—Road—Galveston County plans voting latter part of Jan. on \$1,000,000 bonds. Address County Commrs.

Tex., Georgetown—School—Georgetown School Dist. will receive bids until Jan. 1 for \$62,500, 5%, \$1000 denom. bonds. Address Dist. Trustees.

Tex., Glen Rose—Road—Sumervell County will vote Jan. 16 on \$175,000 bonds. Address County Commrs.

Tex., Kenedy—School—City votes Dec. 26 on \$6000 bonds. Address The Mayor.

Tex., McKinney—School—City Coman. will vote Jan. 20, on \$100,000 bonds. Address J. S. Carlisle, City Supt.

Tex., Nacogdoches—Road—Nacogdoches County will vote Jan. 2 on \$750,000 bonds. Address County Commrs.

Tex., Park Place—Sewer and Street—City, Wm. N. Pearson, Mayor, voted \$175,000 bonds.

Tex., Perryton—Water and Light—City voted \$100,000 bonds. Address The Mayor.

Va., Petersburg—Municipal—City sold \$800,000 bonds to the Mercantile Trust Co.

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of Baltimore and the William R. Compton Co. of New York. Address The Mayor.

Va., Portsmouth—School—Deep Creek Magisterial Dist. voted \$80,000 bonds. Address School Dist. Trustees. (Lately noted).

Va., Richmond—Sewer, Water, Gas and Public Improvement—City sold \$2,000,000 bonds to Central National Bank of Richmond. Address Comm. of Finance. (Lately noted).

Financial Notes.

American National Realty Co., Galveston, Tex., will increase capital from \$25,000 to \$50,000.

S. C., Greenville—Gallivan Building Co., Greenville, S. C., contemplates increasing capital to \$90,000.

The Brunswick Bank and Trust Co., Brunswick, Ga., purchased the Merchants and Farmers Bank of Jeap. combined capital will be \$350,000.

The Citizens Bank & Trust Co. of Pikesville, Tenn., will increase capital from \$12,000 to \$30,000.

Wachovia Bank and Trust Co., Winston-Salem, N. C., will increase capital from \$2,000,000 to \$5,000,000.

Trade Literature.

Nickel Chromium on Cast Iron.

Dr. Richard Moldenke, E. M., Ph.D., of Watchung, N. J., one of the foremost authorities on foundry practice in this country, has made an exhaustive research on the effect of nickel-chromium on cast iron, and the results of his work are embodied in a report which was recently read at the San Francisco meeting of the American Institute of Mining and Metallurgical Engineers. This paper has been reprinted, (by courtesy of the Institute), by the Bethlehem Steel Company, which has a limited number of copies for distribution to foundrymen, metallurgists and others interested. Dr. Moldenke's research had special reference to the nickel-chromium bearing iron ore known to the trade as Mayari pig iron, made from the Mayari ores of Cuba by the Bethlehem Company and the analyses shown cover approximately 250 tests, which are especially valuable in that they show tensile and deflection strengths and hardness in Brinnell number. As printed the paper makes a pamphlet of 23 pages. The introductory remarks state that the tests were made by the crucible melting method because of their number and the degree of accuracy desired. It is also noted that a marked improvement in the quality of castings has been observed when this iron is used in foundry mixtures. The present point of consumption of Mayari ore is at Sparrows Point, Md., where Mayari pig iron of any desired composition is made. Copies of the pamphlet may be obtained by addressing the company at Bethlehem, Pa.

Book Reviews.

Cements, Limes and Plasters. By Edwin C. Eckel, C. E. Second Edition. New York: John Wiley & Sons, Inc. 1922. \$6.50.

In this new edition the author has extensively revised his original work and has brought the statistics and the reference lists up to date, besides adding about 100 pages of new material. It is in the sections devoted to Portland cement, the gypsum products and the magnesian cements that the chief additions have been made, as all of these are growing rapidly. A thorough re-

vision has been made of the sections relating to raw materials of various industries, to fuels and to products, while several hundred analyses have been added in matters of particular importance. More space has also been given to Canadian and other foreign developments. In writing of Portland cement Mr. Eckel has drawn upon a rather extensive experience covering 15 years in this country, Canada, France and Argentina, and his discussion thereof is therefore of more than ordinary value. It is furthermore important to pay especial attention to the introduction to the volume for the material there presented in relation to properly utilizing cost data, and the past and probable future trend of cost and prices is of direct importance to the industries related to cement and cement products. The book, which contains more than 650 pages, is strongly and attractively bound in fine cloth.

Trade Association Activities and The Law. By Franklin D. Jones. New York: McGraw-Hill Book Company, Inc. 1922. Cloth. Pp. 360. \$3.

The author of this comprehensive summary of the experiences of our national trade associations is a member of the bar of the Supreme Court of the United States. Each form of association activity is discussed and the business benefits and disadvantages, the methods of organization and financing, and the law applicable are set forth with clarity. A glance over the respective chapter headings affords a good idea of the contents, thus: Rules of Competition, Purpose of Laws Regulating Competition, Framing Rules of Business Conduct, Dissemination of Basic Business Facts, Study of Costs and Accounting Methods, Standardization, Industrial Research, Associations and Labor, Co-operative Advertising, Traffic and Transportation, Protective Activities, Commercial Arbitration, Speeding Up Distribution, Foreign Trade, Relations Between Industry and Government, and Collective Action Prohibited by Law. There are also appendices that include copies of all the important legislation bearing upon trade association activities, such as the Sherman, Clayton, Webb, and other Acts. Mr. Jones has thus given a most thorough discussion

of the legal and economic aspects of collective action through trade bodies. In the preface he says: "Unfortunately, the willful violation of the law by some associations has created a spirit of hostility and suspicion on the part of the general public toward united action by business men. The achievements of our trade associations, redounding to the public good, have not been told. The strengthening of business ideals, the reduction of the wastes and frictions of trade, the increased efficiency in production and distribution, the vast savings to the public, all of which have resulted from the collective action of business men through their trade organizations, are a closed book to the public. . . . It is hoped that a recital of these achievements may reveal to the public the value of trade associations in our national life."

Stores and Materials Control. By Madison Cartmell, A. B. New York: The Ronald Press Company. 1922. Cloth, Pp. 459. \$4.50.

This is a book which treats in a thorough and painstaking manner the procurement and handling of materials from the very beginning of purchase orders to the shipments of finished products. Moreover, it discusses the subject from the viewpoint of the production manager, describing in detail the records and the mechanism of the stores department, taking up the question of symbolization, costs, inventory control and standards. Procurement by manufacture and by purchase are explained, the several features of production control, the relations of buyer and seller and delivery being graphically discussed. It is to be observed that the author presents methods which have been tested out in large plants and which have been found essential to efficient operation. Small plants that would hold their own today must, it is said, for their own safety adapt these methods to their requirements, the procedure in both classes of establishments being in most instances identical. The volume is unusually well supplied with working forms, charts and diagrams and it is substantially and attractively bound.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers, or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Rapid Completion of Contract.

M. J. Terranova, mason and plaster contractor, St. Petersburg, Fla., who was awarded a contract for the six-story, steel frame Ponce de Leon Hotel there, completed the brick work in 20 working days, this rapid performance being in keeping with work previously done by him on another hotel, apartment houses and residences in the same city besides similar work in Tampa, Fla., upon apartment houses, dwellings and business edifices. His line of activity also includes plain and ornamental stucco work.

five feet high to pieces no larger than a watch. Temperatures range up to 450 degrees Fahrenheit. The installation of electric ovens has, it is stated, been followed by an increase in the volume of production as well as in the perfection of the work turned out. Red pilot lights on the panels show which ovens are in use and an additional safety feature is a switch on each oven door that is opened when the door is opened, eliminating danger of anyone touching the heating units when the current is on.

Important Engineering Contracts.

Lockwood, Greene & Co., Inc., of Charlotte, N. C., and Boston, Mass., are the architects and engineers for the new four-story, composite factory building of the H. M. Wade Company, of Charlotte, which will permit the housing of a number of small industrial enterprises under one roof. The estimated cost of the building, which is of brick and timber construction, with a sprinkler system, is \$200,000. Lockwood, Greene & Co., are also the engineers for the water storage and supply extension of the Riverside & Dan River Cotton Mills, at Dan River, Va.

Electric Ovens Installed.

The Ritter Dental Company, of Rochester, N. Y., makers of dentists chairs, X-Ray cabinets, and an electrical unit carrying a drill motor, heaters, etc., recently replaced their gas jappanning ovens with electrically heated ovens, the heating units and the automatic control panels being furnished by the General Electric Company. These ovens have a total connected load of 280 K.W., 230 volts, three phase, and they are used for jappanning metal parts ranging in size from pedestals

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Lumberton Active in Municipal and Highway Improvements—\$400,000 Being Expended.

Lumberton, N. C., Dec. 23.—[Special.]—Lumberton is now expending \$400,000 for municipal improvements. This includes an important extension to the water works nearing completion, by Tucker & Laxton of Charlotte, N. C., and between 75,000 and 100,000 yards of asphalt pavement under construction by the Southern Paving Construction Co. of Chattanooga, Tenn. The Carolina Engineering Co., Wilmington, N. C. are the supervising engineers.

Lumberton is becoming a textile manufacturing town, with four cotton mills now operating at full capacity, with a total of about 70,000 spindles. The Lumberton Cotton Mills, H. B. Jennings President, are planning to build a 600 loom weave mill. According to Mr. F. P. Grey, secretary of the mills, this will be absorbed in a new corporation and will practically be owned by the same capital.

The four mills at present operating are the Lumberton, Dresden, Jennings and National.

The State Highway Department is now constructing a hard surface road from Lumberton to Maxton, a total of 23 miles. This is on road No. 20 leading from Wilmington to Charlotte and other important points.

Three Buildings Costing \$250,000 Each to Be Erected for Washington University.

St. Louis, Mo.—A gift of \$250,000 has been presented to the University Corporation by Mrs. Newton R. Wilson of St. Louis for the purpose of erecting a building for the Department of Geology.

The new building will conform to the Tudor-Gothic type of architecture and will be constructed of Southeast Missouri granite. Plans are being prepared.

In addition to this structure, two other buildings are in prospect, each to cost \$250,000. One will be the Duncker memorial building for the School of Commerce and Finance, to be presented by Charles H. Duncker, and the other, the Bixby building for the School of Fine Arts, the gift of W. K. Bixby.

Two Schools at Jacksonville to Cost \$700,000.

Jacksonville, Fla.—Contract for the erection of two junior high schools in this city has been awarded to O. P. Woodcock, a local contractor, on his bid for \$550,800. Hooker & Lightbody secured contract for the installation of heating and plumbing at \$76,392, the electric lighting fixtures being included in the general contract. It is estimated that the equipment for both buildings will cost \$50,000.

The buildings will be two and three stories each, 250 by 160 feet, of brick with terra cotta finish and tile roofs. Plans for both buildings are identical and provide for 44 rooms, of which 25 will be class rooms and 19 devoted to special subjects, including an auditorium to seat 1000.

Greeley & Benjamin, of Jacksonville, are the architects and Wm. B. Ittner, of St. Louis, the consulting architect.

Potter County Lets Contract for \$250,000 Hospital.

Amarillo, Tex.—Contract for the erection of the main hospital, a brick building for nurses, and a frame tuberculosis cottage for Potter County Hospital, has been awarded to V. E. Ware of El Paso on a bid of \$145,000. The installation of heating, lighting, hospital equipment and the probable construction of a waterworks system will bring the ultimate cost of the hospital to \$250,000.

Dimensions of the main building are 35 by 140 feet, 3 stories, Y-shape. It will be of reinforced concrete, faced with brick and tile, and supported by a concrete foundation. The conduit system of lighting will be installed. Guy A. Carlander of Amarillo is the architect.

\$300,000 Hotel Project for Williamsburg, Va.

Williamsburg, Va.—Charter has been granted by the State Corporation Commission to the Williamsburg Hotel Corp. of which Frank G. Linekin is president and Oscar L. Shewmake is secretary, to erect a hotel and remodel an annex.

It is the purpose of the company to build a fireproof structure, of 75 bedrooms, 36 tub baths, 20 shower baths, and 19 rooms connecting. The hotel annex will be remodeled for 27 bedrooms with shower baths.

A Byron Williamson of Newport News, is the architect and it is estimated that the cost of the hotel and golf grounds in connection will be \$300,000.

Composite Factory Building to Cost \$200,000.

Charlotte, N. C.—The H. M. Wade Manufacturing Co. is erecting a \$200,000, four story, composite factory building which will have a number of small manufacturing establishments under a single roof. The building will be equipped with two fast freight elevators. On the ground floor will be unloading and storage facilities for each firm. It will be a brick and timber structure, equipped with a sprinkler system for fire protection. Lockwood, Greene & Co., Inc. of Charlotte and Boston are the architects and engineers.

Will Erect Ten Apartment Buildings.

Kansas City, Mo.—Ten apartment buildings including six structures, 45 by 35 feet; two buildings, 128 by 28 feet, and two, 47 by 57 feet, will be erected by the Quality Builders, Inc. All the buildings will be 3 stories high, of brick construction and rubble stone foundations, with hardwood floors.

Plans and specifications were prepared by N. E. Peters of Marion, Mo., and construction will be handled by the owners. Contracts for heating and plumbing have been awarded to Laitner Bros., of Kansas City.

To Begin Canning Grape Fruit in Polk County—Output 500 Cases Daily.

Bartow, Fla.—Early in January Polk County's newest industry—the canning of grape-fruit—will begin in the packing house at Eagle Lake just acquired by the Citrus Exchange. E. H. Lefevre will be in charge of the plant which will have a capacity daily of five hundred boxes containing two dozen cans each. Between 125 and 150 persons will be employed.

Contract Let for New High School.

San Antonio, Tex.—The Board of Education has awarded general contract at \$145,917 to L. E. Shelton for the erection of a high school. Other contracts include plumbing at \$10,279, to Braden & Hudson; heating at \$8117, to A. H. Shaffer, and wiring at \$6775, to Kirkwood & Wharton. Phelps & DeWees are the architects and W. E. Simpson Co., the engineers.

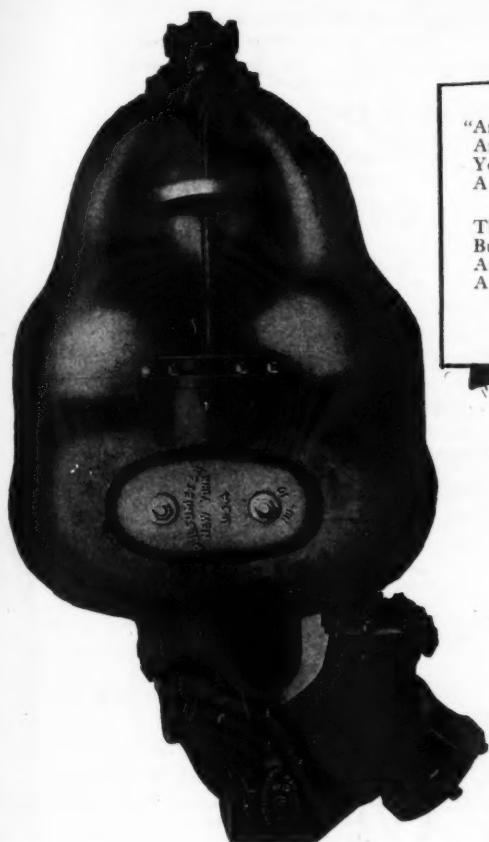
\$350,000 Apartment Building for Atlanta.

Atlanta, Ga.—At a cost of \$350,000, a new apartment building will be erected here by S. P. Cronheim, the financial details to be handled by G. L. Miller & Co. Contract has been awarded to Gude & Co.

The building will be 100 by 340 feet, of the Italian renaissance type of architecture, with terraces and sunken garden. Plans were prepared by G. Lloyd Preacher & Co.

\$500,000 Apartment Building Planned for St. Louis.

St. Louis, Mo.—Plans for the erection of a 7-story apartment building to be erected in this city at a cost of \$500,000 are in progress. The structure will be erected by A. A. Wagner and will contain 100 suites of four, five and six rooms. A site for the building has been secured.



"And they asked me how I did it
And I gave them the Scripture text
You keep your light so shining
A little in front o' the next.

They copied all they could follow,
But they couldn't copy my mind,
And I left 'em sweating and stealing
A year and a half behind."

RUDYARD KIPLING.

"The Rhyme of the Mary Gloster."



Says the successful contractor:

"I've seen that quotation used many times, but somebody ought to *copyright* it for the Pulsometer—they'll never be able to copy or catch up with the Pulsometer features of no lubrication—no foundation—no packing—no belting—it's *a hundred years* ahead of the others and still going!"

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MAP OF SEABOARD AIR LINE RAILWAY IN GEORGIA

THE SEABOARD TRAVERSES THE HEART OF GEORGIA

Remarkable progress has been made by Georgia in industrial and agricultural pursuits.

Its manufactures have a capital of \$450,000,000 and products valued at nearly \$700,000,000.

Its cotton mills have 2,500,000 spindles, nearly 50,000 looms, and consume annually nearly 300,000,000 pounds of cotton.

The value of its farm crops is \$540,000,000.

The national banks of Georgia have resources of \$204,000,000 and deposits of \$111,000,000, while other bank deposits in the state aggregate \$235,000,000.

The assessed value of property in Georgia is \$1,346,000,000.

The territory served by the Seaboard Air Line Railway in Georgia lies in the heart of the great cotton belt; readily accessible to building materials, labor, coal, water, hydro-electric power, and has reasonable rates to consuming centers for cotton goods.

Building sites, taxes and laws for manufacturers are all favorable.

Further information gladly furnished.

JESSE M. JONES, General Development Agent
SEABOARD AIR LINE RAILWAY
 Room 734 Royster Building NORFOLK, VA.

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(Paid-up Capital and Surplus, \$30,000,000)

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A fact which is so axiomatic it is almost needless to be repeated. It is sufficient to say that the policy of this bank is to render modern banking service of the best form. Its success in pleasing 15,000 customers is an evidence of the course pursued.

Correspondence invited.

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\$1,000,000

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MUNICIPAL
BONDS

CITY
DISTRICT

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We Buy Bonds

and invite inquiries from municipalities and contractors

We deal in city, county, district, school, road, lighting, water works and other municipal issues.

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City, County, School and Road, from Municipalities and Contractors

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Southern Trust Bldg.

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We Buy

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NOTICE TO CONTRACTORS

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W. L. SLAYTON & CO.

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Toledo, Ohio

Tampa, Fla.

Chicago, Ill.

Glasgow, Mont.

We Buy Bonds

Southern and Western
Municipal Bonds

Wire at our expense

CAMPBELL & KINSEY

230 Superior St.

Toledo, Ohio

Branches: 618 Penobscot Bldg. Detroit; 313 Dixie Terminal, Cincinnati.

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Liberal discount to investors buying First Mortgage 8% notes on moderate priced homes in the rapidly growing City of Tampa, the commercial, financial and industrial center of South Florida. Communications confidential. Address:

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801 Citrus Exchange Building,

Tampa, Florida.

MARINE BANK & TRUST COMPANY

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Capital and Surplus - \$2,300,000.00

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our best wishes
for a Happy and
Prosperous New
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2000—8.70	10000—28.50

Shipped 48 Hours After Receipt of Order
Charges prepaid to your railroad station
Samples on request

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PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

Bids close December 30, 1922.

U. S. ENGINEER OFFICE, Florence, Alabama.—Sealed Proposals will be received here until 11 A. M., December 30, 1922, and then opened, for the construction and delivery of one 15-inch dredging pump for dredge PETTUS. Further information on application.

Bids close December 30, 1922.

U. S. ENGINEER OFFICE, HUNTINGTON, W. VA., November 20, 1922.—Sealed proposals will be received here until 11 A. M., (Eastern time) December 30, 1922, and then opened, for constructing a Fire-proof Powerhouse at Dam No. 30, Ohio River. Further information on application.

Bids close January 8, 1923.

PROPOSALS FOR KEROSENE (in drums).—Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock a. m., January 8, 1923, at which time they will be opened in public, for furnishing the above-mentioned kerosene. Blanks and information relative to this circular (1507) may be obtained from this Office or the offices of the assistant purchasing agents, 24 State

Street, New York City, and 611 Gravier Street, New Orleans, La.; also from the United States engineer offices in the principal cities throughout the United States.—A. L. Flat, General Purchasing Officer.

Bids close January 12, 1923.

\$500,000 4 1/2% School Bonds

Cumberland, Md.
Sealed bids will be received by the County Commissioners of Allegany County, Maryland, at their office in the Court House, Cumberland, Md., until 11 a. m., January 12, 1923, for an issue of Allegany County Bonds known as "ALLEGANY COUNTY SCHOOL BOND ISSUE OF NINETEEN HUNDRED AND TWENTY-TWO," amounting to Five Hundred Thousand (\$500,000) Dollars.

Bids may be for part or all of the issue. Certified check for five (5%) per cent of the amount bid must be deposited with any bid for said bonds as security for compliance with bid.

The bonds are authorized by Chapter 234 of the Acts of 1922, of the General Assembly of Maryland and bear interest at the rate of four and one-half (4 1/2%) per cent per annum, and will be issued in denominations of One Hundred (\$100) Dollars, Five Hundred (\$500) Dollars, or One

Thousand (\$1000) Dollars, each, purchaser to decide, payable Fifty Thousand (\$50,000) Dollars, on the first day of July, 1936, and a like series to the amount of Fifty Thousand (\$50,000) Dollars on the first day of July in each and every year thereafter, until all of said bonds have been redeemed. The last payment falling due and payable on the first day of July, 1945.

Interest payable semi-annually represented by interest coupons attached to said bonds. Bonds are exempt from municipal and county taxations in Allegany County.

FINANCIAL STATEMENT OF ALLEGANY COUNTY.

Assessable basis	\$56,693,750.00
Bonded indebtedness (not including this issue)	1,020,000.00

No floating debt.

Address all bids to the County Commissioners of Allegany County, Cumberland, care of Thomas P. Richards, Clerk, marked "BIDS FOR BONDS." Further information can be obtained from Thomas P. Richards, Clerk, or Lloyd Lowndes, Attorney, Cumberland, Md.

Right is reserved to reject any and all bids.

By order of the County Commissioners of Allegany County, Maryland.

THOMAS P. RICHARDS,
Clerk.

Bids close January 23, 1923.

U. S. ENGINEER OFFICE. HUNTING-TON, W. VA., December 23, 1922.—Sealed proposals will be received here until 11 A. M. (Eastern Time) January 23, 1923, and then opened, for furnishing and delivering lock-operating machinery, etc., for Dam No. 30, Ohio River. Further information on application.

Bids close January 15, 1923.

\$500,000 Road Bonds

December 11, 1922.

Abbeville, La.

Sealed proposals will be received at the office of the Police Jury of Vermilion Parish in the courthouse, Abbeville, Louisiana, until eleven o'clock A. M., January 15th, 1923, for the Five Hundred Thousand Dollar Bond Issue of Road District Number two of Vermilion Parish, Louisiana.

A certified check for Ten Thousand Dollars must accompany each bid as evidence of good faith to be forfeited to the District should the bidder fail to carry out requirements of the bid.

Depository and fiscal agency arrangements having already been made, no bid with depository or fiscal agency features will be entertained.

The Police Jury reserves the right to reject any or all bids.

Assessment of Property in District, 1921 over \$10,000,000. Estimated real value, \$15,000,000.

Incorporated towns in District: Delcambre, Erath, Abbeville, Kaplan and Maurice.

Population of District: Census 1920, 17,817; Present population estimated, 19,000. Police Jury of Vermilion Parish, Louisiana.

JOS. E. BROUSSARD,

President.

ROM. P. LEBLANC,

Secretary.

Bids close January 15, 1923.

Road Improvement

Orlando, Fla.

Sealed proposals will be received by the Board of County Commissioners of Orange County, Florida, at the office of the Clerk of Court of Orange County, Orlando, Fla., until ten (10) o'clock A. M., on Monday, the fifteenth day of January, 1923, for the construction of approximately fifty-nine (59) miles of hard surfaced roads, consisting of nine projects, varying in length from 2.7 miles to 27 miles, situated in various parts of the county.

Alternate bids will be received for the construction of a rock base either five (5) or six (6) inches thick, and a surface of either bituminous macadam, or asphaltic concrete. Bids will be received on each project separately, or on the work as a whole.

Plans and specifications may be examined at the office of the Chief Engineer at Room 16, Court House, in Orlando, or for the sum of three (\$3.00) dollars may be obtained on applying at the same place.

A certified check, or bidders bond executed by some reputable bonding company authorized to do business in the State of Florida, and represented by a local agent in Orange County, in the sum of One Thousand (\$1000.00) Dollars per mile for the length of the project on which proposals are submitted, made payable to A. Schultz, Chairman Board of County Commissioners, must accompany each proposal.

If a certified check is used, a separate one will be required for each project. If a bidders bond is used, it will be optional with the bidder to furnish one for each project or one only, covering the entire number of miles on which proposals are submitted.

The right is reserved to reject any or all bids on any project, or on the work as a whole.

A. SCHULTZ, Chairman.

B. M. ROBINSON, Clerk.

CHAS. A. BROWNE,

Chief Engineer.

Bids close January 10, 1923.

Paving, Water and Sewer Lines

Albemarle, N. C.

Sealed proposals will be received by the Mayor and Board of Commissioners of the Town of Albemarle, N. C., at the Town Hall in Albemarle, N. C., until 12 o'clock, noon, January 10, 1923, for street improvements, water and sewer lines.

The work will consist of about:

50,000 to 70,000 sq. yds. of asphalt or other pavement.

28,000 lineal feet of curb and gutter.

2,500 lineal feet of granite curb.

800 square yards of concrete gutter.

26,000 cubic yards of grading.

3,500 feet storm water drains.

17,700 lineal feet of 6 and 8-inch cast iron water mains.

16,000 lineal feet of 8-inch terra cotta sewer laterals.

Proposals must be marked, "Proposal for Street Improvements."

All bids must be upon blank forms provided in the Proposal and Contract and Specifications.

Each bid must be accompanied by a certified check for \$5000.00, as evidence of good faith.

Plans and specifications will be on file at the Clerk's office in Albemarle, and at the office of the Engineer in Durham, N. C., and copies of the specifications, form of proposal, etc., will be mailed upon application to the Engineer at Durham, N. C.

The right is reserved to reject any or all bids.

O. J. SIKES, Mayor.

ELI KENDRICK, Clerk.

Engineer:

Gilbert C. White Co.,

Durham, N. C.

Bids close January 11, 1923.

Water Works Improvements

Albemarle, N. C.

Sealed proposals will be received by the Mayor and Board of Commissioners of the Town of Albemarle, N. C., at the Town Hall in Albemarle, N. C., until 12 o'clock, noon, January 11, 1923, for Waterworks Improvements.

The work will consist of:

Brick and Concrete Addition to Filter.

Concrete Filter Tubs.

Concrete Coagulation Basin.

Brick and Concrete Chemical House.

Filter Plant Equipment.

Proposals must be marked, "Proposal for Waterworks Improvements."

All bids must be upon blank forms provided in the "Proposal, Specifications and Contract."

Each bid must be accompanied by a certified check for not less than five (5%) per cent of the amount of the bid, as evidence of good faith.

Plans and specifications will be on file at the Clerk's office in Albemarle, and at the office of the Engineer in Durham, N. C.; and copies of specifications, form of proposal, etc., will be mailed upon application to the Engineer at Durham, N. C., accompanied by payment of Ten (\$10.00) Dollars for each set of plans and specifications, which will be refunded to those who submit bona-fide bids.

The right is reserved to reject any or all bids.

O. J. SIKES, Mayor.

ELI KENDRICK, Clerk.

Engineer:

Gilbert C. White Co.,

Durham, N. C.

Bids close January 18, 1923.

Clearing of Right of Way

Fayette, Ala.

Sealed proposals for clearing the right of way of the Main Canal of the Fayette and Lamar County Drainage District No. 1, will be received by the Board of Drainage Commissioners up to 12 o'clock noon, on the 18th day of January, 1923, at the Courthouse in Fayette, Fayette County, Alabama.

The work to be done consists of clearing approximately 42 miles of right of way for the main canal, embracing approximately 868.6 acres.

Plans and specifications will call for the work to be begun within one month from date of letting of contract and to be completed from 3 to 5 miles ahead of the dredge.

A certified or cashier's check in the sum of \$500.00 must accompany each bid for the whole contract, and in the sum of \$25.00 for each mile, in sections less than the whole, made payable to the Board of Drainage Commissioners of the Fayette and Lamar County Drainage District No. 1, and as evidence of good faith. Checks of unsuccessful bidders will be returned.

All bids must be in sealed envelopes and plainly marked, "Bids for Clearing Right of Way, Main Canal," and addressed to Marion L. Coons, Secretary, Board of Drainage Commissioners, Fayette, Alabama.

Plans and specifications are on file at the office of the Judge of Probate of Fayette County, Alabama, or may be obtained from Guy A. Hart, Superintendent of Construction, Fayette, Alabama.

The Board of Commissioners reserves the right to reject any and all bids.

WM. M. SUDDUTH, Chairman.

MARION L. COONS, Secretary.

Bids close January 30, 1923.

Paving and Water Works

Zephyrhills, Fla.

Sealed proposals addressed to the Board of Mayor and City Council, Zephyrhills, Fla., and marked: "Sealed Proposal for City Improvements," will be received until 2 P. M., January 30, 1923, to be opened immediately thereafter, for furnishing material, equipment and labor and constructing certain work in Zephyrhills, Fla., as follows:

Paving Improvements.

Approximately 7000 yards Paving and Gutters.

Also, necessary grading, curbing, gutters and drainage structures and appurtenances. Bids will be received on sheet asphalt, asphaltic concrete, vitrified brick, cement concrete and similar permanent pavements.

Waterworks Improvements.

200 Tons Cast Iron Pipe and Specials.

25 Fire Hydrants.

16 6 and 8-inch Gate Valves and Boxes.

10,000 Feet Galvanized Pipe.

1 75,000 Gallon Tank on 110 Foot Tower.

2 Centrifugal Pumps driven by Internal Combustion Engines.

Laying Pipe, constructing Pumping Station Building and erecting machinery and drilling one deep well.

Each bid is to be on blank forms furnished by the Clerk and to be accompanied by a certified check, or bid bond issued by a bonding company qualified to do business in Florida for 5% of the bid, made payable to the Town of Zephyrhills, Fla.

Certified check or bid bond will be forfeited as liquidated damage to the Town if contract and bond are not executed within time specified, if Town accepts proposal, otherwise will be returned within ten days.

The right is reserved to reject any or all bids.

After January 10, plans and specifications may be seen at the office of the Clerk or the Engineers. Specifications may be secured from the Engineers by payment of Three Dollars to cover cost of reproduction, which will be refunded when specifications are returned with a bonafide bid.

F. E. TOMLINSON, Mayor.

E. E. QUIGGLE, Prest. of Council.

K. A. HUSE, Clerk.

E. V. CAMP & ASSOCIATES,

Consulting and Supervising Engineers,

Moreland and DeKalb Aves.,

Atlanta, Ga.

Bids close January 16, 1923.

Sewers

OFFICE OF THE CITY ENGINEER.

Richmond, Va.

Sealed proposals will be received at this office until 12 o'clock Noon, Tuesday, January 16, 1923, for the building of Reinforced Concrete, Precast Concrete, Segment Block, Brick and Vitrified Pipe sewers, at various places within the limits of the City of Richmond.

The approximate cost of the work is \$700,000.00. Of this amount \$250,000.00 will be for various contracts for materials, to be furnished by the City, at the site of the work, and \$450,000.00 for various contracts for construction. A deposit of \$10.00 per set is required for plans and specifications before they are delivered to bidder which amount is returnable after bidder's proposal is received.

Forms of proposals can be obtained on application.

A certified check for amount stated on proposals must accompany each bid as a guaranty of execution of contract. The Director of Public Works reserves the right to reject any and all bids.

ALLEN J. SAVILLE,

Director of Public Works.

CHAS. E. BOLLING,

City Engineer.

Bids close January 20, 1923.

Brick School

Cottage City, Md., Dec. 2, 1922.

Sealed proposals will be received and opened January 20, 1923, at 3 o'clock P. M., at the residence of Victor E. Peterson, 6 Ross Street, Cottage City, Md., for erection of an up-to-date one-story, four-room-and-basement brick school building; to be located at Central Avenue near Spa Street, Cottage City. Plans and specifications may be obtained from C. M. Lighthown, Cottage City, upon deposit of \$10 to insure return. BY AUTHORITY OF BOARD OF EDUCATION OF PRINCE GEORGE'S COUNTY, MD.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS WATER POWERS, MISCELLANEOUS PROPERTIES

Colonial estate, farms, timber, coal, camps, game-preserves, health-resorts, grazing lands, sub-divisions, colonization, Willis & McNeil, General Real Estate, Rockymount, Virginia.

IRON ORE LAND

Parties desiring to purchase mountain land rich in iron ore, testing at least 60%, will communicate with D. L. Breeden, Rocklin, Va.

COAL LANDS AND MINES

FOR SALE—Going coal mines—coal, oil and gas lands—timber tracts. Reports made on same anywhere. E. H. Morris, Box 518, Charleston, W. Va.

FOR SALE—Two coal properties in Virginia, located on Carolina, Clinchfield & Ohio Railway. Non-Union field. Electrically equipped. C. & O. Big Sandy rates apply to western points. Low rates to Southern points. Terms. Address Box 148, Johnson City, Tenn.

TIMBER

STANDING TIMBER FOR SALE—Approximately 10,000,000 feet as follows: 3,250,000 feet Oak, about 90% White Oak, 1,000,000 feet Poplar, 500,000 feet Forest Pine, and 5,250,000 feet Second Growth Pine.

This is handsome timber. Most of it large, tall, smooth and straight. Situated in Charlotte County and Halifax County, Virginia, lying between the Virginian Railway and the Norfolk & Western Railway, being two miles distant from each railway, and taking favorable freight rates to the north, east and west. The haul to one railway is over an improved sand clay road.

This timber stands on about 1400 acres. Logging conditions are excellent. Price reasonable. Terms liberal. Personal investigation invited. Address No. 6105 care Manufacturers Record, Baltimore, Md.

FOR SALE—BY OWNERS

MEXICAN TIMBER

500,000,000 feet long leaf pine and oak. There is a market in Mexico for all it will produce. Titles perfect. Address Box 253, Ravenna, Ohio.

TIMBER LAND

TIMBER LAND

FOR SALE

600 acres in white, chestnut, red and Spanish oaks, good deal of hickory and chestnut which is very tall. Located in Marshall County, Ala., on navigable stream in three miles of Tenn river. Also 700 acres in hardwood and long leaf pine. Located on Coosa river, and four miles from R. R., St. Clair County, Ala. The price is reasonable. For further information address P. O. Box 373, Alabama City, Ala.

FARM AND TIMBER LAND

FLORIDA—Timber, Colonization and Fruitland tracts; any size; best in Florida. Maurer Company, Orlando, Fla.

FARM, FRUIT, AND TRUCK LANDS

FLORIDA

FLORIDA—Did you know that Florida is developing faster than any other State in the Union? It is, indeed, a land of great resources and opportunities. Come and be one of us. No coal hills, no wintry ice or snow—just sunshine, and health, and opportunity. Send for booklet "Largest Orange Tree in the World," we have a Home, Grove or Farm for you. Tampa-West Coast Realty Co., (Inc.) opposite Post office, "Since Before the War," Tampa, Fla.

FOR SALE

Fine farm, 600 acres—480 acres in cultivation—3 tenant houses—plenty of water, 100 acres in bearing paper shell pecans. Price \$50,000 spot cash. Reason for selling, need the money. Louis B. Smith, Greenwood, Fla.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisement accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 28c. per line; 300 lines, 26c. per line; 500 lines or more, 25c. per line.

NORTH CAROLINA

FOR SALE—50-acre farm, \$3000; 140-acre farm, \$6000. Write for particulars. J. B. Phillips, Jr., Middlesex, N. C.

SOUTH CAROLINA

Truck farms that pay dividends annually can be bought at reasonable prices here. Vegetables are shipped eight months in the year. Three and four crops are grown on the same land annually. Excellent climate and health. Plenty of labor; strikes unknown. Well organized association that sells all farm products. For particulars write, Lake Realty Company, Beaufort, S. C.

BUSINESS OPPORTUNITIES

FOR LEASE—Office space in Rhodes Building and loft space in adjoining connecting building, fireproof, steam heated, on main thoroughfare, three blocks from center of city, especially adapted to Manufacturers' Agents, carrying stocks or samples. Let us furnish particulars as to service rates, etc. A. G. Rhodes & Son, 202 Rhodes Building, Atlanta, Ga.

ATTENTION COTTON PLANTERS

We own 3000 acres of partially improved land, unencumbered in South East Missouri, where Boll Weevil is practically unknown and which will produce without fertilizer over a bale of cotton per acre. We will consider putting this land into an operating corporation with experienced and financially competent cotton producers. Correspondence invited. Address No. 6109 care Manufacturers Record, Baltimore, Md.

FOR SALE—Charming Mineral Springs; 100 acres; self-supporting; 200 steps of Lee Highway and Southern Ry. Arsenic, Iron, Magnesia, free stone. Net profits per season, \$3400. C. G. SAMUEL, Athens, Tenn.

FOR SALE—Outright or on a royalty basis, patent Vacuum Container, improvement patents pending. Perishables shipped without ice; strong, simple and durable. Pat.No.1430575. W. P. Simpson, Erwin, Tenn.

I SPECIALIZE in industrial, warehouse and business sites at and adjacent to Washington, D. C.

M. B. HARLOW, Harlow Building, Alexandria, Va. Colorado Building, Washington, D. C.

Interest open in Marine Transportation and Commission Company. Business enough from South to earn \$300,000 Net Annually. 25% on capital invested. Alfred S. Perry, Perry Building, Fairfield, Conn.

If interested in the BEST SECTION OF THE SOUTH If you want a Cotton Mill, or Southern Mill Stocks or Investment in Central Real Estate or Large Suburban Development property or a Manufacturing Site Address

F. C. ABBOTT & COMPANY, Trust Building, Charlotte, N. C.

FINANCIAL

Wanted to bond our company for \$100,000 in such a way that it will pay out in seven years. Will pay 8%, and defray expenses of appraising and drawing papers. We carry at least \$250,000 worth of real estate. Investment perfectly safe. What can you offer? Box 511, Charleston, W. Va.

"An Honest Money System," controlled by our Government, in place of the present dishonest "bank credit" debt manufacturing, banking and currency system, controlled by banking corporations organized for private gain; is the greatest political issue to be decided by the voters. Read "Daniel on Real Money," the best text book solving the money question. New edition being published. The Monetary Educational Bureau, Kellogg Building, Washington, D. C.

\$23,000.00 Real Estate notes bearing interest at rate of 6% per annum. Maturing \$2000.00 semi-annually. Will give good discount for quick sale. Cart Land Company, P. O. Box 511, Charleston, W. Va.

FOR SALE—\$150,000.00 Preferred Stock, pays 8% annually, payable 4%, January 1st and 4% July 1st, secured by real estate, and as real estate is sold stock will be redeemed at face value plus 10%. Investment invited. Cart Land Company, P. O. Box 511, Charleston, W. Va.

COLLECTIONS

Past due accounts collected promptly on commission basis—send us statements—no collection, no charge. Remit on day of collection. Rate card on request. Correspondents in all cities. Herbert & Co., Rand McNally Building, Chicago, Ill.

INDUSTRIES WANTED

COTTON MILL LOCATION.

Cotton mill site offered to any one to establish mills in Camp Hill, Alabama. High class labor at reasonable prices plentiful: Electric power furnished by ALABAMA POWER COMPANY; Good water supply; good citizenship; located in the heart of the cotton belt.

The Chamber of Commerce, Camp Hill, Ala., Luther Land, Secy.

Boonville, Mo., invites manufacturing plants and other industries that require good labor conditions, transportation facilities, inexpensive sites, low taxes, etc., and offers co-operation by the Chamber of Commerce, H. C. Neef, Secy.

POWER FOR SALE

The Town of Pilot Mountain, Pilot Mountain, N. C., offers to a manufacturer who will locate a plant in or near the town, approximately 500 H. P. electrical energy, at a very low figure. Power should be available in June, 1923.

The location: on the Southern Railroad, a town of 1200 people, 55 miles north of Greensboro, N. C. and with cheap power and labor available; makes ideal conditions for manufacturing purposes. Information as to details, address W. H. Reid, member Power Committee, Pilot Mountain, N. C.

INDUSTRIAL PLANTS

FOR SALE OR LEASE—Modern, three-story factory building, with electric lights, heat and elevator, in business section, on railroad. Fifteen thousand square feet of floor space. Suitable for manufacturing cigars, garments or other light industry where electric power is used. Cheap labor and current. Location: Best City in Virginia; three railroads and on Lee Highway. 140 miles southwest of Washington, D. C.—John E. Sullivan, Harrisonburg, Va.

TRUSTEES' SALE—Modern electrically equipped mill and lumber yard. Two blocks of ground with Pennsylvania and Southern Railway sidings. Six miles from Washington on a concrete road. Address: Carter Brothers, Alexandria, Va.

INDUSTRIAL PLANTS

FOR SALE—Fine building and manufacturing site, 1600 feet on main highway, extending back to the main line of Southern railway tract about 400 feet deep. Back of this there is 67 acres in the same tract with about 1000 feet railroad frontage. This property is two miles from the center of the City of Charlotte, N. C. Adjoining other manufacturing plants, Charlotte has a population of 30,000. Some one can clean up 50,000.00 bucks on this property. Write us for price and blueprints, Shuman Bros., owners, P. O. Box 775, Charlotte, N. C.

FACTORY SITES

BALTIMORE

FACTORY

SITES

William Martien & Company.

1413 Lexington Bldg.,

Baltimore, Md.

MANUFACTURING SITE
CAMDEN, SOUTH CAROLINA.
IDEAL SITE LOCATED S. A. L. AND
SOUTHERN RAILWAYS. WITHIN 300
YARDS OF HYDRO-ELECTRIC POWER
JUST OUTSIDE OF CITY LIMITS.
PRICE VERY REASONABLE.
T. K. TROTTER,
ATTORNEY,
CAMDEN, S. C.

NEW ORLEANS.
Commercial and Factory Sites and Buildings
Gurley & Parkinson,
338 Carondelet St.

PATENT ATTORNEYS

PATENT SENSE

"The Book of Inventors and Manufacturers."
FREE. WRITE LACEY & LACEY,
Dept. 15, Washington, D. C. Est. 1869.

PATENTS, TRADE-MARKS AND COPY-
RIGHTS—Write for our Free Illustrated
Guide Book and EVIDENCE OF CONCEPT
TION BLANK. Send model or sketch and
description of your invention for our
opinion of its patentable nature free.
Highest references. Prompt service. Reasonable
terms. Victor J. Evans & Co.,
712 9th St., Washington, D. C.

PATENT ATTORNEYS

PATENTS—Booklet free. Highest references. Best results. Promptness assured.
Watson E. Coleman, Patent Lawyer, 624 F
St., Washington, D. C.

INVENTORS—Send sketch or model of
your invention, for opinion concerning patent-
able nature, and exact cost of applying
for patent. Book, "How to Obtain a Patent"
sent free. Gives information on patent
procedure and tells what every inventor
should know. Established 25 years. Chand-
lee & Chandlee, 412 7th St. N.W. Washing-
ton, D. C.

AGENCIES WANTED

MANUFACTURERS REPRESENTATIVE
established office with large selling force
solicits accounts for the Carolinas. Ad-
dress C. E. Rogers, Greensboro, N. C.

SITUATIONS WANTED

ASPHALT chemist with several years
experience in the manufacture and laying
of different types of bituminous pavements,
desires permanent position with some mu-
nicipality or contractor. References from
City Engineers. Address 6107 care Manu-
facturers Record, Baltimore, Md.

ENGINEER with 18 years' construction
experience, as engineer, superintendent of
construction and sales promotion, desires
position as sales engineer; wide acquaint-
ance among engineers and contractors in
North Carolina, South Carolina, Georgia
and Florida; references furnished. No. 6108
care Manufacturers Record, Baltimore, Md.

MEN WANTED

SALESMEN WANTED: We need the
services of capable salesmen with ability
to sell plumbing supplies. Good opportu-
nity for salesmen with large experience
and acquaintance preferably with the
TRADE of Virginia and North Carolina.
McGraw-Yarbrough Co., Richmond, Va.

REPRESENTATIVES WANTED
We want live Representatives in All Large
Cities for the Sale of Steel Reinforcement
and Accessories for Reinforced Concrete,
etc. We are an old established concern.
Liberal commissions paid to live Sales En-
gineers who are willing to enter into yearly
contracts. Sales Engineers with established
Business preferred. No. 6110 care Manu-
facturers Record, Baltimore, Md.

MEN WANTED

Salaried positions \$2500 to \$25,000 up-
ward; executive, technical, administrative,
engineering, manufacturing, professional,
managing, financial, etc., all lines. If you
are qualified, and receptive to tentative
offers for a new connection, you are invited
to communicate in strict confidence with
the undersigned, who will conduct pre-
liminary negotiations for such positions.
A method is provided through which you
may receive overtures in confidence, with-
out jeopardizing present connections, and
in a manner conforming strictly to pro-
fessional ethics. Send name and address
only; preliminary particulars will be sent
without obligating or compromising you
in any way. R. W. Bixby, Inc., 403 Lock-
wood Building, Buffalo, N. Y.

EXECUTIVES

Qualified men—Technical, Commercial or
Manufacturing—seeking new positions find
our effective and confidential service ex-
tremely satisfactory. Our Mr. H. H. Har-
rison can negotiate a suitable connection
for you as he has done for thousands of
others since 1909. Inquiries invited; con-
fidences respected.
THE NATIONAL BUSINESS BOURSE, Inc.
Confidential Negotiators
Association Building, Chicago.

LIME

Five Oaks Lime & Stone Co., Tazewell,
Va., announce that their new modern steel
lime plant is now complete and producing
a beautiful white lime, free of ashes. We
desire to build up a market for our lime
and will put forth every effort to satisfy
our customers.

LUMBER AND BUILDING MATERIAL

FOR SALE

- 1 car 4x3-2 1/2" Fc. B&Btr. Ceiling.
 - 1 1/2 car 4x3-2 1/2" Fc. No. 1 Com. Ceiling.
 - 2 cars 32" No. 1 Kiln Dried Plaster Lath.
 - 4 cars 32" No. 2 Kiln Dried Plaster Lath.
- INGRAM DAY LUMBER COMPANY,
Lyman, Miss.

MACHINERY AND SUPPLIES

Job lot of about 50 pulleys. Will sell
lot for about 10% of real value. Write
quick! Pratt Thompson, 220 E. Lexington
St., Baltimore, Md.

SPECIAL ADVERTISEMENTS OF GENERAL INTEREST

Plant Sites For Sale in the

Birmingham District

HYDRO-ELECTRIC POWER EQUABLE CLIMATE

Sizes to suit all needs on all rail-
roads. Supplies of coal, coke, iron
and steel within trucking distance.

Labor situation better than in other
industrial centers. Hydro-electric
power available. Equable climate
Address

BIRMINGHAM REALTY CO.

Owners
BIRMINGHAM, ALA.

MODERN NEW PLANT and 25 Acres—Elyria, Ohio

Main building monitor type, brick and steel, wood block floor. 82 1/2 x 162.
B. & O. siding in bldg. Electric Crane. Power House 50x51. Boilers,
engine, generator and power wiring installed. Frame office building 16x48.
City water and sewer. A wonderful buy at a real price.

W. S. POLE

1172 E. 6th Street

ERIE, PA.

GOING BUSINESS—FOR SALE Fully Equipped Manufacturing Plant

Making an established line of plows, harrows, cultivators,
etc. Located in Southwestern Ohio. Two railroad sidings,
85,000 sq. ft. floor space. 3 1/2 acres land. Brick buildings.

The Long & Allstatter Co., Hamilton, Ohio



MODERN NEW PLANT and 25 Acres—Elyria, Ohio

Main building monitor type, brick and steel, wood block floor. 82 1/2 x 162.
B. & O. siding in bldg. Electric Crane. Power House 50x51. Boilers,
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City water and sewer. A wonderful buy at a real price.

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Making an established line of plows, harrows, cultivators,
etc. Located in Southwestern Ohio. Two railroad sidings,
85,000 sq. ft. floor space. 3 1/2 acres land. Brick buildings.

The Long & Allstatter Co., Hamilton, Ohio

GET THE FACTS

about **GEORGIA KAOLINS and REFRACTORY CLAY**

Which cover an area 225 miles long and from 20 to 50 miles in width. Many of the deposits can be worked with little or no industrial haulage.

Overburden light and deposits are rich in kaolins and refractory and pottery clays,

The United States Bureau of Mines, in co-operation with the Central of Georgia Railway, has been doing research work in the refining and treatment of these clays since July 1, 1921.

Let us mail you map and description of resources and the results of tests

J. M. MALLORY

General Industrial Agent

**CENTRAL of GEORGIA
RAILWAY COMPANY**
SAVANNAH, GA.

LOCATIONS FOR WAREHOUSES INDUSTRIAL SITES THE TEXAS AND PACIFIC RAILWAY AT DALLAS

Has completed the construction of industrial trackage serving twelve blocks of industrial property, now ready for use, well and conveniently located.

AT FORT WORTH

Trackage service is given to a large acreage, formerly used by the Government as Camp Bowie. Fourteen warehouses now available, well suited for storage, or sites for small industries.

Will be glad to furnish details and prices.

Address

Frank J. Burke

Land & Industrial Commissioner

Dallas, Texas

CONCRETE GRAVEL PLANT

For sale an interest in same or outright, I believe the best proposition of the kind in the South, in a territory where the demand has been greater than the supply for years.

This is a river proposition and the farthest gravel beds south and west of the Mississippi River.

Plant consists of New Dipper Dredge, barges, locomotive crane and complete screening and elevating plant, on a gravity track off main line Trunk Railway, no locomotives required in loading.

Big territory and where the price has been averaging more than \$1.50 per yard plant and should show a dollar yard profit on that basis with this plant.

Plant is ready to run and has cost me more than I am able to finance alone, and a few minor improvements yet needed, hence will make it attractive to any one with the knowledge of such business and as an investment.

R. A. GIBSON
SHREVEPORT, LA.

HUNTINGTON ON THE CHESAPEAKE & OHIO RAILWAY

SOLD

To the INTERNATIONAL NICKLE COMPANY

and they have completed their first \$3,000,000. unit for the manufacture of their celebrated monel metal at Huntington. Can we introduce stronger evidence of the desirability of Huntington as a manufacturing center than to reproduce the statement of Executive Engineer W. L. Wotherspoon of the International Nickel Co., this statement being made recently before a meeting of the American Society of Mechanical Engineers in New York City.

Mr. Wotherspoon says:

LABOR: Labor is made up of 95 per cent English speaking Americans, both common and skilled, with good records in the territory in diversified industries, the turnover is light and a majority of the workers own their homes.

FUELS: A plentiful supply of natural gas for manufacturing and domestic purposes, from public service utilities is available at a cost of from 18 to 19 cents per 1000 cubic feet. Investigation of developed and undeveloped gas fields indicates supply of gas for 15 to 20 years. A good supply of high oil or low sulphur content is available from the local oil refinery at present price of from 5 to 6 cents per gallon delivered at plant. There is an excellent supply of high grade bituminous steam and gas coals from local coal fields costing \$2.50 to \$3.00 delivered at the plant.

POWER: Two modern central stations supply power at a cost to large industries of 11 to 12 miles per kw-hr.

TRANSPORTATION: Thirteen railroads make connections within 175 miles. The Ohio river is navigable all the year, traffic between Pittsburgh, Huntington and Cincinnati being on regular schedule.

WATER: Both river and bore-hole water of good quality are available, the latter at an average of 60 feet.

CLIMATE: The climate is equable, with generally cool nights and little snowfall.

SUPPLIES: Refractories, charcoal castings and steel are obtainable in this district.

TAXES AND LAWS: These compare favorably with those of other districts. There are no smoke laws in West Virginia.

SITE: A site of 76 acres was procured just outside the present city boundary of Huntington and directly connected to the Chesapeake & Ohio railroad and will be similarly connected with the Baltimore & Ohio railroad when extensions now planned are completed. The site is also on the Guyan river and within about one mile of its junction with the Ohio river. The topography of about ten acres of the 76 is ideal for use as a gravity slag dump. Flood conditions in the Ohio valley were studied and records for about 40 years analyzed, which showed that only on two occasions—the last being the 1913 flood, has flood water been sufficiently high to endanger property at the elevation of the site selected. The ground for foundations is excellent, being solid clay for a depth of from 12 to 18 feet, underneath which is a stratum of coarse compact sand.

The location was sufficiently close to Huntington which is a growing city of about 65,000 inhabitants, to obviate the necessity of the company building homes for officials or workmen.

Huntington's nearness to the greatest coal fields on earth makes an appeal to the far sighted manufacturer that no other consideration can offset. Its transportation by rail and water, its gas, its citizenship all lure the man who is looking for ideal conditions. *Plenty of information freely given by*

K. T. CRAWLEY, Manager

Industrial Dept. of Chesapeake & Ohio Rwy., RICHMOND, VA.

Hauling Problems Solved For Road Contractors and Industrial Operators by Hauling Engineers.

We have large fleets of motor trucks, from one to seven ton capacity—ready to haul for any contractor on any job, anywhere.

We have dump trucks, or stake bodies—can handle loose or butch aggregate—cement, lime, stone, dirt, lumber, anything.

Service our motto—Let us quote you and show how we can save you money.

FARBER SERVICE
Farber Contracting Co.
No. American Bldg., Phila., Pa.
TRUCKS GO EVERYWHERE

FOR SALE A STEEL FRAME CONSTRUCTION DAYLIGHT BUILDING

293' x 74½'

This building is brand new, Blueprints will be furnished and inspection may be made at the Aberdeen proving grounds, upon application to

UNITED IRON & METAL CO.
CATHERINE ST. and B. & O. R. R.
BALTIMORE, MD.

FOR SALE

Just purchased entire yard of Carolina Shipyard at Wilmington, N. C. We are offering all materials for quick disposal and immediate delivery.

The following is a partial list of what we are offering:—

- 1—250'x160' Building—All columns and roof trusses steel.
- 1—252'x70' Building—All columns and roof trusses steel.
- 1—Steel crane.
- 7—Thomas "B" frame double drum electric hoists.
- 1—American angle heating furnace 3' wide, 60' long.
- 1—American plate heating furnace 8' 3" wide, 35' 3" long.
- 1—Davis Bournsville Acetylene Generating Plant Cap. 300 cu. ft. gas per minute.
- 4—12"x8"x24" Worthington vertical Simplex boiler feed pumps.
- 1—10"x12"x12"x12" Worthington Horizontal simplex air and generating pump.
- 7—9"x9" general ordnance, double cylinder single drum hoists.
- 11—Griscom-Russell drinking water stills.
- 4—Jewell drinking water stills.
- Steel Booms.
- Steel Masts.
- 2—Double steel smoke stacks.
- 1—600 sq. ft. American Engineering Condenser.
- 6—1000 H.P. Boilers.
- 1—Baldwin-Altoona Locomotive.

together with steel blocks, steel wire rope, ship hardware, valves, switches, switch boards and other materials too numerous to mention. Write for catalogue today.

H. Klaff & Co.

Central Ave. & Gough St. WILMINGTON, N. C.
BALTIMORE, MD.
Address all communications to Wilmington, N. C.

NEW ORLEANS**Sales Representation—Storage—Delivery**

A New Orleans firm now representing several large manufacturers of nationally known products has ample facilities to care for further lines. Will act as sales representative or merely storage and delivery.

Large warehouse, private switch track, and adequate loading facilities. Desk space with phone and other conveniences may be had if desired. Address

**A-280 care Manufacturers Record
Baltimore, Md.**

WANTED

A PLANT TO LOCATE ON THE PROPERTY OF THE APPALACHIAN MARBLE COMPANY WHICH WILL REQUIRE ABOUT 200 TONS PER DAY OF MARBLE SPALLS, ONE MAN SIZE.

This material is highly suitable for manufacturing lime and for crushed material, especially material that is required to be very finely ground as our materials grind very cheaply and have an extremely high analysis, 99% pure carbonate of lime.

LOCATION

Five miles from court house, Knoxville, Tenn. Good roads, railroad and on river.

Can arrange for satisfactory location of plant and for a long time lease.

APPALACHIAN MARBLE COMPANY

Incorporated

TENNESSEE MARBLES

KNOXVILLE - - TENN.

RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES

Freight Cars

We are in the market for all-steel or steel underframe freight cars of not less than 40 ton capacity.

E. H. WILSON & COMPANY
COMMERCIAL TRUST BUILDING
PHILADELPHIA

PIPE WANTED

Wanted to buy 1550 feet 5-inch pipe with flanges attached. Also, 550 feet 4-inch pipe screwed connections.

APPALACHIAN MARBLE COMPANY
Knoxville, Tenn.

FOR SALE

Worthington Pump 16x9x12
Air Compressor 8x8 Steam driven
250 h.p. Lane & Rodley Corliss engine
18 Loom Beams 18" heads, 5" barrel 44" inside heads
12 Warper Beams 24" heads, 8" barrel, 55" inside heads
all of the above at Dublin, Georgia. For particulars address
Post Office Box 515 Savannah, Georgia

SHEET ZINC

New and in Original Crates

441,000 lbs. size 26 $\frac{3}{8}$ " x 55 $\frac{3}{8}$ " 7 gauge.

114,000 lbs. size 12 $\frac{1}{8}$ " x 16 $\frac{7}{8}$ " 7 gauge.

Send for sample and bargain price.

NASHVILLE INDUSTRIAL CORP.
JACKSONVILLE, TENN.

AIR DRILLS, HAMMERS, ETC.

- 3—No. 2 R Little Giant Air Drills
 - 1—No. B Thor Air Drill
 - 4—No. 2 Little David Air Drills
 - 25—No. 22 H Thor Air Drills
 - 15—No. D 3 Thor Air Drills
 - 1—No. 42 Thor Air Drill
 - 3—No. D D Thor Air Drills
 - 1—No. 40 R Little Giant Air Drill
 - 21—No. 61 Thor Duplex Air Drills
 - 6—No. F Thor Air Drills
 - 15—No. 3 Thor Bucker Ups
 - 23—Bucker Ups
 - 2—No. 5 Oldham Bucker Ups
 - 12—No. A Thor Chipping Hammers
 - 1—No. C Thor Chipping Hammer
 - 2—No. 60 Thor Riveting Guns.
 - 2—No. 50 Thor Riveting Guns
 - 49—No. 60 New Boyer Riveting Guns—Long Stroke
 - 29—No. 60 Keller Master Riveting Guns.
- The above are all used tools.
175—Tons New rivets.

DIXIE MILL SUPPLY COMPANY, Inc.
NEW ORLEANS, LA.

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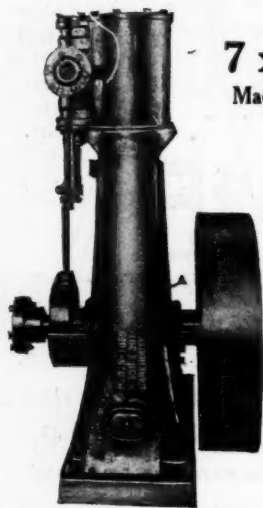
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Pump

- 1-Janesville—L.P. Cylinder 12", H.P. Cylinder 26", Stroke 15".

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- 1-Mesta Machine Co. Compound low pressure Air Compressor. Bore of Cylinder L.P. Steam 36". Bore of Cylinder L.P. Air 34". Bore of Cylinder H.P. Steam 22". Bore of Cylinder H.P. Air 26". Stroke 48". R.P.M. 90, Pressure 100 lbs. Corliss Valve type.
- 1-Ingersoll-Rand Co. low pressure Imperial type No. 10 Cross Compound air compressor. Bore of Cylinder L.P. Steam 34". Bore of Cylinder L.P. Air 34". Bore of Cylinder H.P. Steam 20". Bore of Cylinder H.P. Air 18". Stroke 38". R.P.M. 100, Pressure 100 lbs. Corliss Valve type.

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New and slightly used

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- 1-3" Deming Diaphragm Hand Pump
- 1-3" Mansfield Diaphragm Hand Pump
- 5-4" Barnes Diaphragm Hand Pumps
- 1-3" Fairbanks-Morse Diaphragm Pump with gasoline Engine
- 1-3" C. H. & E. Diaphragm Pump, with gasoline engine (on trucks)
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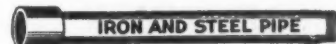
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Rods, 14' to 22' lengths.

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PIPE

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- 3-No. 2 Goulds Power Rotary Pumps—with jack shaft and pulley.
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- 2-Same as above—connected to 25 HP Motor.
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- 20-15 KVA—11,000, 10,500, 10,000 to 440-220 volts, 60 cycle, single phase, Westinghouse Transformers.
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- 3-50 HP, 440 volt, Westinghouse Induction Motors, type CS, style 180817, 3 phase, 60 cycle, 1170 r.p.m., 57.5 amp., complete with pulley 12x12 base and starter.
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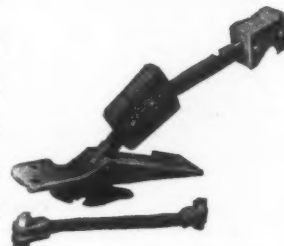
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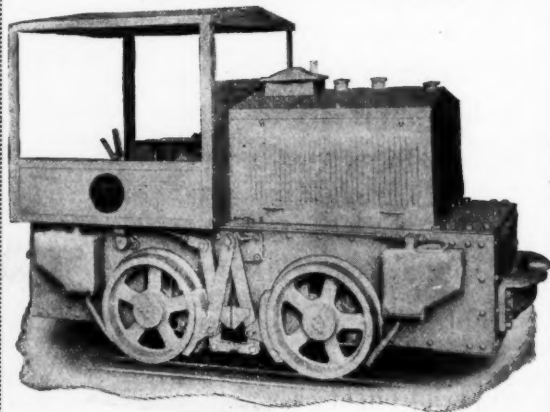
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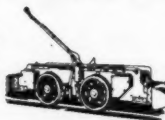
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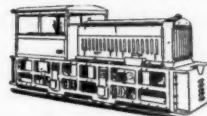
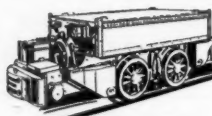
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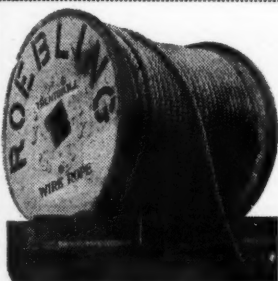
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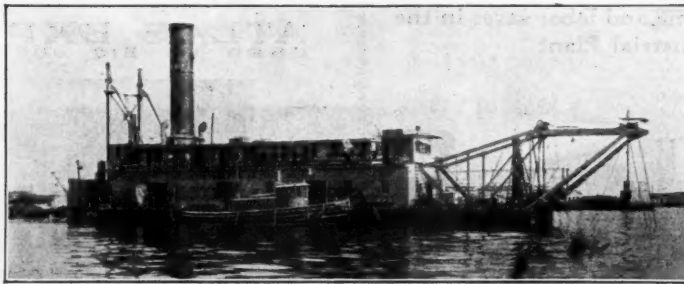
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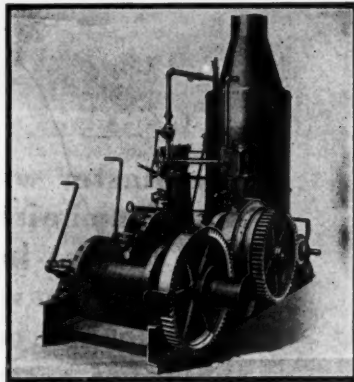
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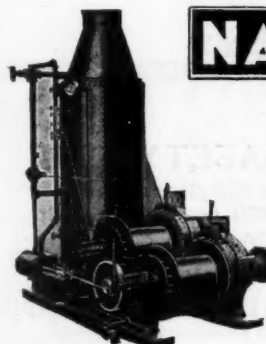
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Bergen St., Harrison, N. J.



LIDGERWOOD HOISTS

Steam—Electric—Gasolene
for all

Contractors' Uses

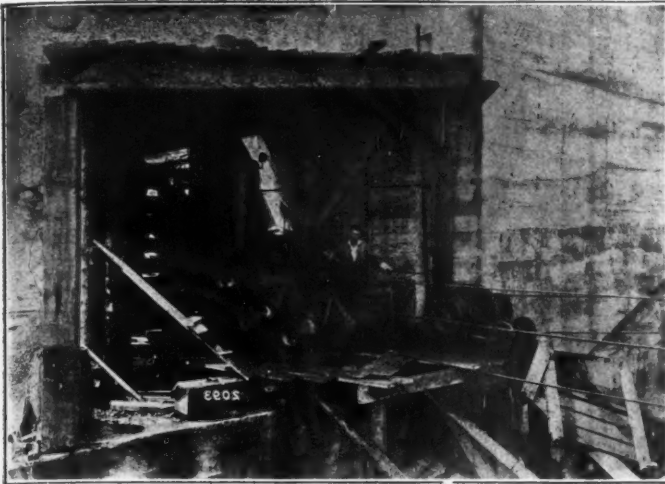
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Illustration shows a three drum engine, with separate swinging engine, operating a two line grab bucket derrick. Used by the Parklap Construction Company, in building dam for the International Paper Company.

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We Standardized the 125 Lbs. Pressure Hoisting Engine

They Use Stroudsburgs

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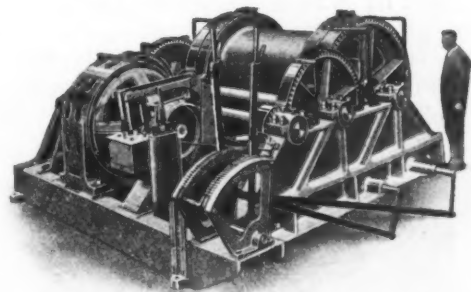
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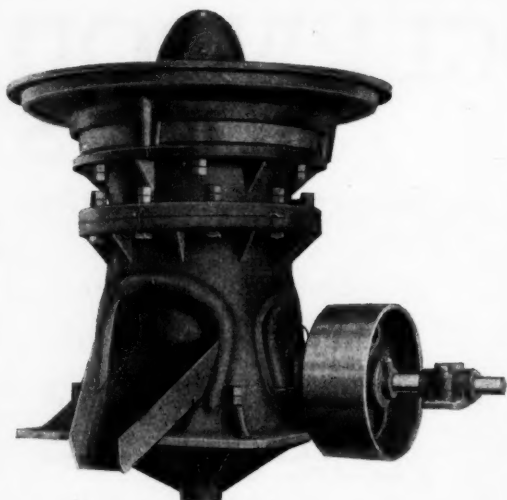


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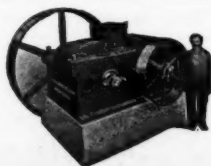
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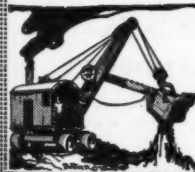
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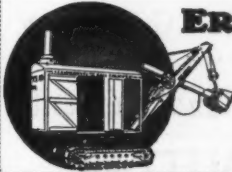
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Is made under the direct supervision of chemists and engineers of thorough experience.

Every detail of its manufacture is constantly watched and checked up by laboratory tests.

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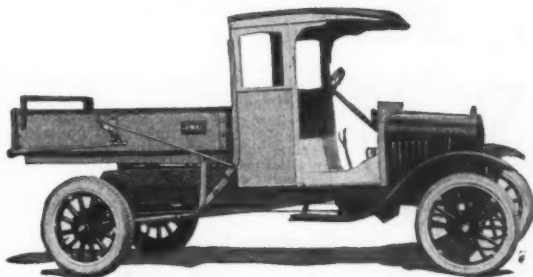
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The lift required is about 30 lbs.

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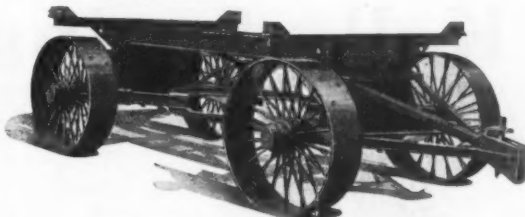
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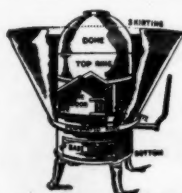
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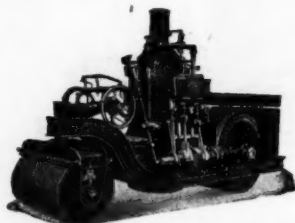
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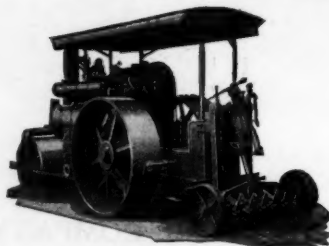
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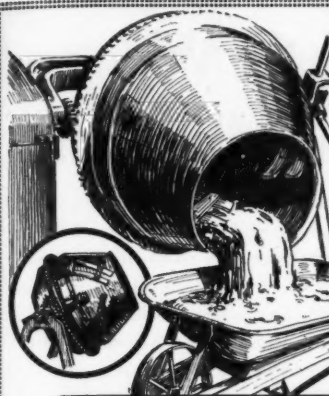
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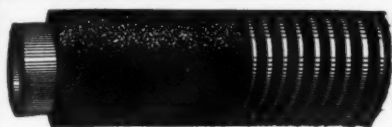
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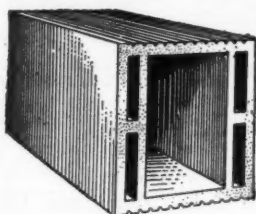
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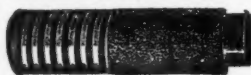
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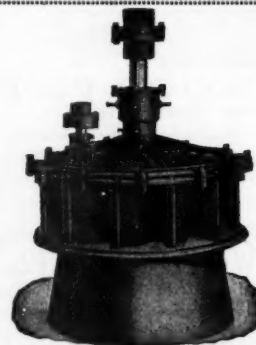


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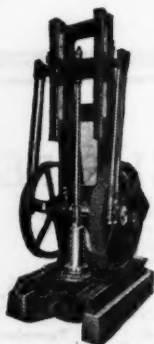
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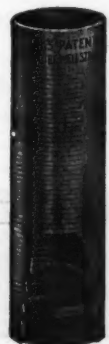
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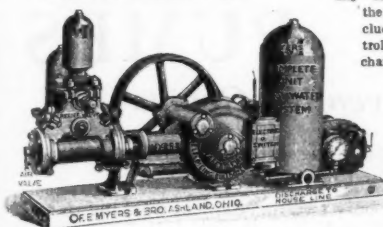
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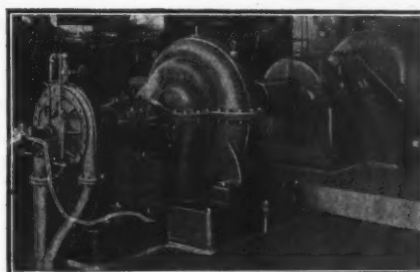


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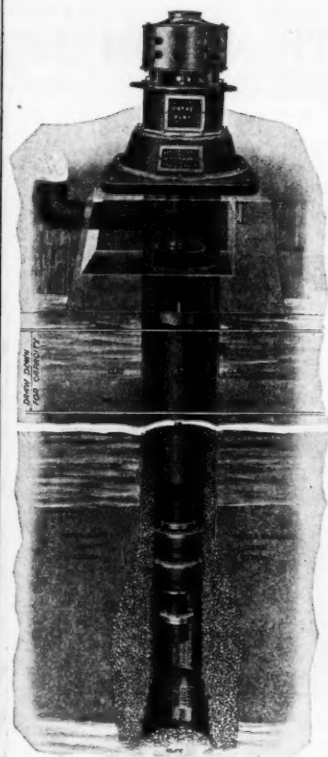
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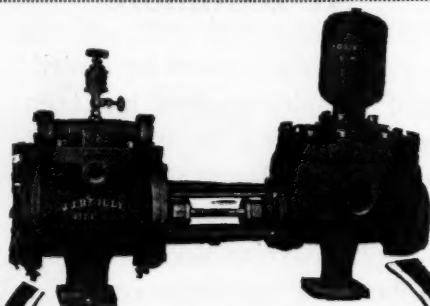
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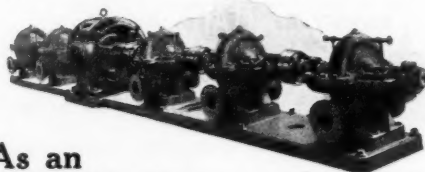
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Parks Ball Bearing Machine Co., The, Cincinnati, Ohio.

YARN. (Tarred Steel.)
Plymouth Cordage Co., North Plymouth, Mass.

Whitlock Cordage Co., New York, N. Y.

Alphabetical Index of Advertisements

A

A-280 102
 Abendroth & Root Mfg. Co. *
 Acme Wagon Co. †
 Air-Tight Steel Tank Co. 36
 Alabama Company 16
 Alabama Power Co. 139
 Albert & Davidson Pipe Corp. 107
 Albright & Mebus 38
 Allegheny Steel Co. 18
 Allen Engineering Co. 112
 Allis-Chalmers Mfg. Co. 124
 Allison, Walter A. 38
 Allyn & Co. A. C. 95
 Ambruster, Howard M. 40
 American Appraisal Co. 40
 American Bridge Co. 20
 American Cast Iron Pipe Co. 121
 American Cement Machine Co., Inc. †
 American Cement Tile Mfg. Co. 26
 American Creosote Works, Inc. 32
 American Creosoting Co., Inc. 32
 American Elevator & Mech. Co., Inc. 33
 American Enamelled Brick and Tile Co. 24
 American Fence Construction Co. †
 American Limestone Co. 116
 American Pattern Wks. Co. 37
 American Process Co. †
 American Refractories Co. †
 American Rolling Mill Co. †
 American Mch. & Eq. Co. 37
 American Saw Mill Machinery Co. 34
 Amer. Sheet & Tin Plate Co. 18
 American Spiral Pipe Wks. 15
 American Steel & Wire Co. †
 American Telephone & Telegraph Co. †
 Amer. Water Softener Co. †
 American Window Glass Co. 23
 Anchor Post Iron Works †
 Anderson Fdry. & Mch. Co. †
 Anston Refractories Co. †
 Appalachian Marble Co. 102-103
 Archer & Co., E. T. 38
 Arctic Ice Machine Co. 9
 Armo Culvert & Flume Mfrs. Association. †
 Armstrong & Co., Archer 108
 Armstrong Mfg. Co. †
 Arundel Corporation 116
 Ashland Fire Brick Co. 8
 Ashmead, Henry C. 115
 Ashworth, F. K. 38
 Asphalt Asso., The †
 Atkins & Co., E. C., Inc. †
 Atlanta Bolt & Steel Products Co. †
 Atlanta Terra-Cotta Co. 25
 Atlanta & West Point R. R. Co. †
 Atlantic, Gulf & Pacific Co. 112
 Atlas Car & Mfg. Co. 110
 Atlas Portland Cement Co. †
 Atlas Powder Co. 111
 Audubon Wire Cloth Co., Inc. 23
 Austin Machinery Corp. †
 Austin Mfg. Co. 114
 Austin-Western Road Machinery Co. 119
 Automatic Electric Co. †
 Ayres & Miller †

B

Babcock & Wilcox Co. 6
 Baber, Henry H. A. S. 109
 Bacon & Sons, A. S. 31
 Bailey-Libby Co. 6
 Baker Ice Machine Co., Inc. 9
 Ball Engine Co. 115
 Baltimore Belting Co. †
 Balto. Builders' Exchange. †
 Baltimore Commercial Bank 95
 Bank of Alabama, The †
 Bannan Pipe Co. 120
 Barber Asphalt Co. †
 Barnett Co., G. & H. †
 Barrett Company †
 Bartholomew Hardwood Co., E. R. 28
 Batson, S. R. 38
 Bauer Bros. Co. †

Bay City Dredge Works. 112
 Bayley & Co., C. A. D. 43
 Beaver Mfg. Co. †
 Beckley & Trusler. †
 Bell & Co., A. T. 95
 Belmont Iron Works. 21
 Benjamin Equip. Co., Harry 108
 Berger Mfg. Co. 26
 Berger Mfg. Co. of Texas. 120
 Berkeley, W. N. 38
 Berry Bros. †
 Bessemer Gas Engine Co. 5
 Bethlehem Steel Co. 35
 Biggs Engineering Co., W. E. 11
 Binney & Smith Co. 22
 Binswanger & Co. †
 Birmingham Clay Products Co. 24
 Birmingham Rail & Loco. Co. 107
 Birmingham Realty Co. 99
 Birmingham Sign Co. 117
 Black & Co. †
 Black & Veatch 38
 Black River Cypress Co. 32
 Blake Lumber Co., Thos. W. 31
 Blaw-Knox Co. †
 Bliss Co., E. W. 14
 Blystone Mfg. Co. of America 6
 Bonney Supply Co. 115
 Bonville, Mo., Chamber of Commerce †
 Borne, Scrymser Co. †
 Bourbon Copper & Brass Works Co. 120
 Box & Co., Inc. Alford 106
 Boxley & Co., W. W. 116
 Brenner & Michaelson †
 Briddell Co., Inc., W. C. 108
 Brill Hill Steel Co. 18
 Broderick & Bascom Rope Co. 46
 Brooks Supply Co. 107
 Brownell Company †
 Browning Co., The †
 Buchanan Co., Inc., C. G. 114
 Buckeye Blower Co. †
 Buckeye Machine Co. †
 Buckeye Traction Ditcher Co. †
 Buffalo Forge Co. †
 Buffalo Springfield Roll Co. 118
 Buffalo Steam Pump Co. †
 Burkett Sheet Metal Works †
 Burrows, E. A. 40
 Byers Machine Co. 112
 Bylesby Eng. & Management Corp. 39

C

Cabot, Inc., Samuel 31
 Caldwell & Co., E. R. 95
 Caldwell & Co., E. R. 95
 Caldwell & Son, W. E. 36
 Caldwell & Son, H. W. 4
 Cambria Clay Products Co. 8
 Campbell & Kinsey 95
 Camp & Associates, E. V. †
 Canal Construction Co. 38
 Cannelton Clay Products Co. 8
 Cannelton Sewer Pipe Co. 8
 Canton Art Metal Co. †
 Canton Culvert & Silo Co. 120
 Capital Lift & Mfg. Co., The †
 Carborundum Co. †
 Cardwell Machine Co., The 35
 Carey Co., Thos. F. 108
 Carnegie Steel Co. †
 Carolina Engineering Co. 38
 Carriage Marble & White Lime Co. 24
 Castle & Wilson 104
 Central Coal & Coke Co. 28
 Central Foundry Co., The 121
 Central Gulf Lumber Co. †
 Central of Georgia Railway 100
 Central Pipe & Sup. Co. 107
 Central Steel Co. †
 Chain Belt Co. †
 Chambers Bros. Co. 27
 Champion Bridge Co. †
 Champion Engr. Co., The †
 Chandlee & Chandlee †
 Charleston Dry Dock & Machine Co. 6
 Chase Metal Works †
 Chattanooga Armature Works 10
 Chattanooga Boiler & Tank Co. 36
 Chattanooga Paint Co. 33
 Chattanooga Road Machinery Co. †

Chattanooga Sewer Pipe Works. 121
 Chesapeake Belting Co. 14
 Chesapeake Iron Works. 11
 Chesapeake & Ohio Railway Co. 101
 Chicago Watchman's Clock Works. 34
 Christie Co., L. R. 37
 Church & Dwight Co. 32
 Chuse Engine & Mfg. Co. 5
 Cincinnati Fly Screen Co. †
 Cincinnati Frog & Switch Co. 109
 Cincinnati Iron & Steel Co. †
 Clark, Jr., Elect. Co., Jas. 10
 Clark & Krebs 38
 Classified Opportunities. 97-98-99

Cleveland Belting & Machinery Co. 106
 Climax Engineering Co. †
 Climax Mfg. Co. †
 Clinchfield Portland Cement Corp. 117
 Cohen & Sons, Louis 108
 Coldwell-Wilcox Co. 37
 Cole Mfg. Co., R. D. 36
 Colonial Croesoting Co., Inc. 32
 Columbia Wagon & Body Co. †
 Columbian Iron Works Co. 120
 Columbus Conveyor Co. 115
 Columbus Forge & Iron Co. 34
 Columbus McKinnon Chain Co. 110
 Concrete Steel Bridge Co. 40
 Concrete Steel Co. 15
 Consolidated Prod. Co. 103
 Construction Machinery Co. †
 Continental Gin Co. 35
 Continental Machinery Co. 9
 Contractors Machinery & Supply Co. 103
 Converse Bridge & Steel Co. 21
 Cook, A. D. 122
 Cook's Sons, Inc., Adam †
 Cooper & Co., Hugh L. 38
 Copper & Brass Research Asso. †
 Cordele Sash, Door & Lumber Co. 31
 Corinth Machinery Co. 39
 Cornell-Young Co. 39
 Cortright Metal Roofing Co. 26
 Covington Mach. Co., Inc. 14
 Crane Co. 9
 Crawford & Slayton 39
 Creosoted Materials Co. 32
 Cresson-Morris Co. 12
 Crocker-Wheeler Co. 10
 Crompton & Knowles Loom Works †
 Crow, Waller, Inc. 40
 Crucible Steel Casting Co., Inc. †
 Cummer & Son Co., F. D. 118
 Currin Bay Copper & Iron Works †
 Cutler Mail Chute Co. 31

D

Dahlstrom Metallic Door Co. †
 Dake Engine Co. †
 Dart Mfg. Co., E. M. 8
 Davis Foundry & Machine Works †
 Davis & Son, G. M. 36
 Davison Chemical Co. 41
 Day & Zimmerman, Inc. 39
 Dean Bros. Steam Pump Works. 35
 De Laval Steam Turbine Co. †
 Delaware Registration Trust Co. †
 Delta Equipment Co. †
 Dempster Equip. Co. 109
 Dexter Metal Mfg. Co. 24
 Diamond Mfg. Co. 108
 Diamond Rubber Co., Inc. †
 Dietrich Bros. †
 Dings Magnetic Separator Co. 115
 Dixie Brass & Foundry Co. 34
 Dixie Mill Supply Co. 102
 Dixie Portland Cement Co. 116
 Dixie Sand & Gravel Corp. 116
 Dixon Crucible Co., Jos. 8
 Domestic Engine & Pump Co. †

Domination Metal Prod. Corp. 120
 Donnelly & Co. 16
 Dorman Co., J. F. W. †
 Doubleday-Hill Elec. Co. †
 Doullut & Williams Co., Inc. 38
 Doughton Iron Works. 38
 Dow & Smith 38
 Dow Co., Inc., The 46
 Draper Corporation 46
 Draper, E. S. 38
 Drouve Co., The G. 22
 Druid Oak Belting Co. 14
 Dufur & Co. 22
 Dunning & Boschert Press Co. †
 DuPont de Nemours, E. I. †

E

Eagle Wagon Works †
 Earle Gear & Machine Co. 122
 East Iron & Machine Co. 108
 Eastman Gardner Hardwood Co. 28
 Eavenson & Associates, Howard N. 38
 Eco Clock Co. 34
 Edge Moor Iron Co. 32
 Edwards Mfg. Co. 2
 Eichley Jr. Co., John 30
 Electric Bond & Share Co. 95
 Electric Controller & Mfg. Co. †
 Electric Hoist & Derrick Co. 105
 Electric Welding Co. 15
 Electric Wheel Co. 117
 Elkins & Co., M. W. 102
 Elphinstone, D. C. 102-106
 Elwell-Parker Electric Co., The 46
 Emerson Pump & Valve Co. 123
 Empire Coal Co., The 4
 Empire Refractories, Inc. †
 Eppinger & Russell Co. 37
 Erie Perforating Co. 37
 Erie City Iron Works †
 Erie Machine Shops 118
 Erie Pump & Engine Works †
 Erie Steam Shovel Co. 115
 Evans & Co., Victor J. †
 Evinsrud Motor Company †
 Exch'g Sawmills Sales Co. 30

F

Farber Contracting Co. 101
 Farris Bridge Co. 21
 Fawcus Machine Co. 12
 Fernholtz Brick Mch. Co. 27
 First Nat. Bank, Richmond, Va. †
 Fleet-McGinley Co. †
 Florio Metal Products Co. 120
 Flory Mfg. Co., S. 112
 Foss Gas Engine Co. 39
 Ford, Bacon & Davis, Inc. 39
 Foster Co., H. M. †
 Foundation Company 22
 Frank, M. K. 108
 Fraser, Brace & Co. 40
 Freeland, Roberts & Co. 38
 Freeman, Samuel T. †
 Freeport Sulphur Co. 41
 Freese & Co., E. M. 27
 Frick Co. †
 Friend & Co., Inc. 116
 Frink, Inc., I. P. †
 Froehling & Robertson 38
 Fuston, Walter J. †

G

Gallon Iron Works & Mfg. Co. 115
 Gardner & Howe 38
 General Electric Co. 13
 General Motors Truck Co. †
 George Construction Co. 40
 Georgia Car & Loco. Co. 108
 Georgia-Carolina Brick Co. 107
 Georgia Creosoting Co., Inc. 32
 Gibson, R. O. 100
 Glamorgan Pipe & Fdry. Co. 121
 Golden's Fdry. & Mch. Co. 12
 Goodrich Rubber Co., B. F. †
 Good Roads Machinery Co. †
 Goodyear Tire & Rubber Co. †
 Gordon Metal Co. 116
 Gottschall & Co., L. B. 106
 Gould Mfg. Co. †
 Grainger & Co. 124
 Grant Supply Co., Chas. J. 108

Great Southern Lumber Co. 29
 Green, James A. 107
 Green Fire Brick Co., A. P. 8
 Gregory Electric Co. 163
 Greiner & Co., J. E. 38
 Griffin, Frank 106
 Grinnell Co. †
 Gruendler Patent Crusher & Pulverizer Co. †
 Gulfport Creosoting Co. 32
 Gulf Refining Co. 11
 Gulf States Portland Cement Co. †
 Gurley, W. & L. E. 48

H

Hadfield-Penfield Steel Co. 27
 Hais Mfg. Co., Geo. 115
 Halsey-Stuart & Co. †
 Hamburg Boiler Works 18
 Hammond-Bird Iron Co. 120
 Hammond Heating Co. 31
 Hanchett Bond Co. †
 Harrington & King Performing Co. †
 Harris Bros. Co. 103-103
 Hartley Boiler Works 36
 Hauser-Stander Tank Co. 36
 Hayward Co. 112
 Heine Boiler Co. 140
 Heineken, W. P. 106
 Heitzel Steel Form & Iron Co. 118
 Hemphill & Co., Inc., J. L. 195
 Hendricks, Inc., S. E. 42
 Hercules Mfg. Co. 37
 Hercules Powder Co. †
 Highland Pines Inn 27
 Hill & Griffith Co. †
 Hills Co., George B. 39
 Hill & Co., John T. 109
 Hill, Norman Alan 40
 Hix-Turner Glass Co. 22
 Hittner's Sons Co., Henry A. 107-107
 Hochstadter Laboratories 38
 Hoisting Machinery Co. 108
 Hollander Equip. Co. †
 Hood Brick Co., B. Mifflin †
 Houston, Stanwood & Gamble Co. †
 Howard Refractories Co. 8
 Hubbard-Floyd Co., Inc. 105
 Hubbell, Inc., Harvey 43
 Hughes Specialty Well Drilling Co. †
 Hunt & Co., Robert W. 39
 Huntington & Querry, Inc. 39
 Hutten & Schreffer 38
 Hyman-Michaels Co. 100

I

Ideal Electric Mfg. Co., The 10
 Independent Pneumatic Tool Co. 110
 India Alkali Works. †
 Industrial Equipment Co., The †
 Industrial Lumber Co. †
 Ingalls Iron Works Co. 18
 Ingersoll-Rand Co. 111
 International Clay Machinery Co. †
 International Filter Co. †
 International Steel & Iron Co. 20
 Ironton Fire Brick Co. 8

J

Jacksonville, Fla., City Adv. Dept. †
 Jaeger Mach. Co., The 119
 Jeffrey Mfg. Co. †
 Jennings Bros. †
 Jennings Automatic Dump Body Co., Inc. 117
 Johns-Manville, Inc. †
 Jointless Fire Brick Co. 8
 Jones & Laughlin Steel Co. †
 J. T. Tractor Co., The †

K

Kane, Thos. A. 107
 K. C. Elevator Mfg. Co. †
 Kehoe, Robert P. 103
 Kelly-Springfield Tire Co. †
 Kentucky Oxygen-Hydrogen Co. 102
 Kentucky Rock Asphalt Co. 26
 Keystone Driller Co. †
 Keystone Pipe & Supply Co. †
 Kilby Frog & Switch Co. 109
 Kimball Bros. Co. 33

King, Philip T.	1	Midvale Steel & Ord. Co.	19	Pfannmueller Engineering	103	Seeger Machine Tool Co.	106	Union Drawn Steel Co.	*
Kingsport Brick Corp.	24	Milburn, Heister & Co.	38	Phoenix Iron Co.	21	Septik Tank Co.	†	Union Mining Co.	8
Kinnear Mfg. Co.	46	Miller & Co., G. L., Inc.	†	Photostat Corp.	†	Seyfert's Sons, Inc., L. F.	†	Union Sulphur Co.	40
Kinney Mfg. Co.	119	Minter Homes Co., The	†	Photoat Corp.	†	Sharon Pressed Steel Co.	18	United Iron & Metal Co.	101
Kirby-Bonner Lumber Co.	28	Mitchell-Tappen Co.	21	Pipe & Contractors' Supply	106	Sharpsville Boiler Works	†	Universal Concrete Products	81
Klaff & Co., H.	101	Model Land Co.	*	Pittsburgh-Des Moines	138	Shearer, C. E.	*	Universal Machine Co.	14
Kleinhaus Co., H.	109	Moeschl-Edwards Corrugating	†	Pittsburgh Machinery &	†	Shepard Electric Crane &	10	Universal Road Mch. Co.	118
Klein & Co., Nathan	103-103	Co.	†	Equipment Co.	22	Holst Co.	†	U. S. Cast Iron Pipe & Fdry.	121
Klyce, B. H.	38	Moffatt Mch. Mfg. Co.	33	Pittsburgh Plate Glass Co.	18	Sherwood, E. C.	108	U. S. Power Equip. Co.	106
Knoxville Iron Co.	15	Monaghan Machine Co.	†	Pittsburgh Steel Co.	18	Shreveport Blow Pipe &	†		
Koehring Co.	†	Monro Warrior Coal &	4	Pittsburgh Testing Labora-	40	Sheet Iron Works, Ltd.	†		
Kries & Sons Co., Henry A.	103	Coke Co.	†	tory.	123	Silverman Co., W. H.	95		
		Moore Dry Kiln Co.	†	Platt Iron Works	123	Singer Iron & Steel Co.	108		
		More-Jones Brass & Metal	†	Co.	†	Sirrino & Co., J. E.	†		
		Co.	*	Plymouth Cordage Co.	†	Slayton & Co., W. L.	95		
		Morgan Construction Co.	18	P. O. Box 515	102	Smith Co., The T. L.	†		
		Morgan Millwork Co.	28	Pole, W. S.	†	Smith Co., Oscar T.	†		
		Morris Machine Works	123	Portable Machinery Co.	115	Smith Co., S. Morgan	122		
		Morrison Co., Hackley	104	Porter Co., H. K.	110	Smith Co., The	39		
		Morse Agricultural Service	39	Portland Cement Assn.	†	Smith-Courtney Co.	11		
		Morse Chain Co.	11	Potomac Refractories Co.	8	Smith Gas Engineering Co.	21		
		Motter's Sons, Geo. F.	102	Posay, James	40	Smythe Co., S. R.	40		
		Mount, W. D.	39	Pottstown Steel Co.	103	Snead Architectural Iron	21		
		M. O. & W. Engineering	†	Powell Co., Wm.	†	Works	†		
		Corp.	38	Power Mfg. Co.	†	Sonneborn Sons, Inc., L.	†		
		Mueller Metals Co.	†	Power Specialty Co.	6	Southeastern Constr. Co.	38		
		Mundt & Sons, Chas.	37	Pratt & Whitney Co.	14	Southern Creosoting Co.,	32		
		Mundy Hoisting Engine Co.	†	Prentiss & Co., Inc.	17	Ltd.	†		
		J. S.	113	Probert Sheet Metal Co.	22	Southern Cypress Manufac-	†		
		Murphy's Hotel	†	Progressive Mfg. Co.	35	turers' Assn.	†		
		Murray Iron Works Co.	4	Proposal Advertisements	96-97	Southern Hotel	†		
		Myers & Bro. Co., F. E.	123	Provident Savings Bank &	†	Southern Ice Machine Co.	9		
				Trust Co.	95	Southern Iron & Equip. Co.	†		
				Publicity Engr. Inc.	96	Southern Mosaic Tile Co.	24		
				Pulsometer Steam Pump Co.	†	Southern Pine Association	†		
						Southern Sheet & Tin Plate	26		
						Co.	†		
						Southern Spindle & Flyer Co.	†		
						Southern States Portland	116		
						Cement Co.	†		
						Southern Steel Products Co.	15		
						Co.	32		
						Southside Fdry. & Mch. Wks.	104		
						Spiker & Loe	40		
						Standard Rail & Steel Co.	108		
						Standard Wood Pipe Co.	121		
						Stanley Lumber Co., H. F.	28		
						Starrett Co., L. S.	†		
						St. Charles Hotel	27		
						Steel, John A., Jr.	38		
						Steele & Sons, J. C.	27		
						Stevens Bros. & Co.	8		
						Stewart & Co., Paul	†		
						Stewart Iron Works Co.	†		
						Stone & Webster, Inc.	†		
						Strand & Co., N. A.	†		
						Street Bros. Machine Works	†		
						Inc.	†		
						Stroudsburg Engine Works	113		
						Structural Slate Co.	†		
						Stump Un-Flow Engine	†		
						Co., Inc.	†		
						Sullivan Machinery Co.	110		
						Sun Shipbuilding Co.	†		
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						Sydnor Pump & Well Co.,	122		
						Inc.	†		



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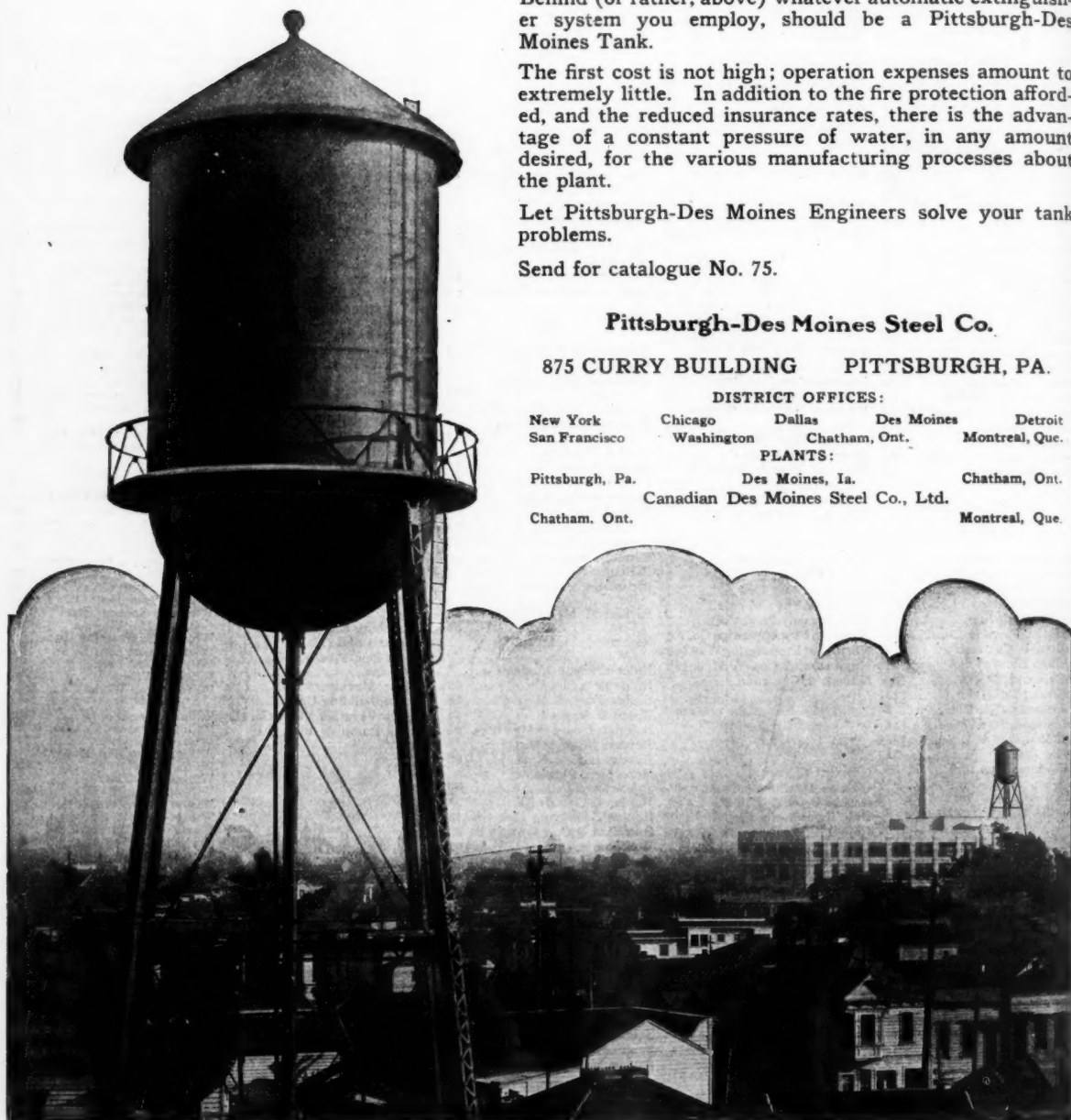
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